

FINAL ENVIRONMENTAL ASSESSMENT

The Department of Environmental Quality (DEQ) prepared this final environmental assessment (EA) in accordance with requirements of the Montana Environmental Policy Act (MEPA). An EA functions to identify, disclose, and analyze impacts of an action over which the state must make a decision, in this case permitting a gravel pit. MEPA sets no environmental standards and provides no authority for the DEQ to impose conditions or mitigations beyond those allowed under applicable state laws, such as the Opencut Mining Act, the Clean Air Act, or the Water Quality Act. As a result, this document may disclose impacts that have no legislatively required standards (such as noise), or over which DEQ has no regulatory authority (such as traffic). In such instances, a company may voluntarily agree to modify its proposed activities or accept permit conditions. A permit decision is based on whether or not the proposal meets the requirements of the Opencut Mining Act and other applicable environmental laws.

The state law that regulates gravel-mining operations in Montana is the Opencut Mining Act. This law and its associated rules place limited operational conditions on a project during its life, and provide for the reclamation of land subjected to opencut mining. This law requires the operator to post a bond or other financial instrument so DEQ has the financial capability to reclaim a mined site to its approved, post-mining land use if the operator is unable or unwilling to do so. Beyond the opencut mining permit, it is the responsibility of the operator to identify and obtain all other regulatory permits and approvals that are required to conduct operations at the site. Depending on the location and the nature of operations, additional approvals may include a county road access permit, state water right, DEQ air quality permit, and any other required local, county, state, or federal permit or approval.

This document supersedes the draft EA dated October 26, 2007 that DEQ made available for public comment from November 7, 2007 through January 4, 2008. DEQ subsequently compiled and evaluated the public comments and assessed additional information received from individuals, agencies and organizations, including the operator, Helena Sand and Gravel (HS&G). As a result, DEQ believes this final EA is based on the best available information. This document includes DEQ's responses to public comments, additional mitigation measures proposed by HS&G based on their consideration of public comments, and other potential permit conditions and/or mitigation measures developed by DEQ as a result of the public involvement process.

Project Name: Lake Helena Drive Pit **Proposed Implementation Date:** Spring 2008

Proponent: Helena Sand & Gravel **County:** Lewis & Clark

Location: The proposed permit area is located in Section 19, Township 10 North, Range 2 West (Figure 1).

Type and Purpose of Proposed Action: HS&G has applied to the DEQ for a permit to develop an aggregate mining operation that would excavate, crush, screen, stockpile and transport approximately 6.3 million cubic yards of material over 10 years.

Section I: Description of Proposed Action:

Access: The proposed permit area would be located on HS&G land between Valley Drive and Lake Helena Drive, south of Canyon Ferry Road, approximately 1 mile north of East Helena. The access road to the site would extend west from Lake Helena Drive at a location approximately 0.6 mile south of Canyon Ferry Road and 1,100 feet south of the Helena Valley Irrigation District canal (Figure 1). The access road off Lake Helena Drive would be paved within two years of commencement of asphalt batching activities (Figure 2).

Proposed operations: The proposed permit area would encompass 111.5 acres (Figure 2). Mining would begin in the spring of 2008. HS&G proposes to mine to a depth 5 feet above the high water table as determined by groundwater monitoring data. Based on currently available groundwater elevation data, HS&G anticipates the maximum depth of mining would be approximately 40 feet below grade. HS&G would remove approximately 6.3 million cubic yards of material over 10 years. Sand and gravel mining operations in the proposed pit would commence near the eastern end of the permit area. During the first year of operation, scrapers would be used to strip topsoil from an area approximately 20 to 25 acres in size. Salvaged topsoil would be placed to form a 12-foot high berm along the Valley Drive side of the permit area to serve as a sight and sound barrier (Figure 2). Topsoil would be salvaged in accordance with the Dust Mitigation Plan (Attachment 3) prepared by HS&G (2008a) to prevent the wind from blowing soil containing elevated concentrations of metals off-site. This plan has been approved by the Lewis & Clark County Health Department's East Helena Lead Education and Abatement Program (LEAP) (2008) and the DEQ Superfund program (DEQ 2008). The berm would be mulched and vegetated using hydroseeding methods and watered as necessary to support the establishment of vegetation.

The crusher would be set near the west edge of the stripped area. Unprocessed sand, gravel and cobbles would be transported to a portable primary feeder and jaw crusher using wheeled loaders. Excavation with wheeled loaders would initially be in an area (pad) of 15 to 20 acres and approximately 15 feet in depth. This pad would be constructed to establish bases for the crusher, concrete batch plant and asphalt hot plant at an elevation approximately 15 feet below grade to reduce the visible profile and noise emanating from site operations. Based on results of an environmental noise study (BSA 2008), the crusher pad would eventually be established at a depth of 20 feet below grade and a 25-foot high, horseshoe-shaped berm of sand and gravel excavated from the site would be constructed around the crusher pad (Figure 2) to further reduce off-site noise impacts. This berm would be constructed on the existing (pre-mining) site grade. The 25-foot high berm would remain in-place throughout site operations, such that when the base of the crusher eventually rests 20 feet below grade, there would be a total of 45 feet of relief to the top of the berm. In addition, to further reduce off-site noise impacts, an approximately 20-foot high working stockpile of processed material would be developed between the crusher pad and the concrete/asphalt batch plants.

After the pad for the crusher and plants is ready, construction of the asphalt hot plant would occur throughout the spring/summer of 2008. The installation of the concrete batch plant would be performed during the winter of the second (2009) or third year (2010) of operation at the site.

During the spring of the third year, prior to utilization of the concrete batch plant, a wash plant would be added to the crusher equipment set-up, and a series of settling ponds would be constructed to allow the sediment washed out during the production process to settle out of the wash water, prior to recycling of the water for production operations. These unlined settling ponds would be excavated to a depth of approximately 10 feet below grade. One concrete-lined pond would be constructed to catch concrete-mixer wash water and thereby prevent migration of alkaline water to the groundwater beneath the site. Other facilities would include a scale house/office, grizzly screen, pug mill, and conveying equipment as necessary.

As excavation of the unprocessed sand, gravel and cobbles progresses from the initial 20 to 25 acres throughout the remainder of the permit area, the maximum depth of excavation would be at least 5 feet above the high water table. The depth to groundwater at the site would be confirmed through implementation of the Groundwater Sampling and Analysis & Contaminant Detection Response Plan (TetraTech 2008c) prepared for the site (Attachment 4) and permit conditions. Based on currently available groundwater elevation data, HS&G anticipates the mining depth would be approximately 40 feet below grade. The unprocessed material would continue to be excavated with wheeled loaders and transported to the crusher/plant production area via an overland conveyor belt. As mining requires, the

overland belt would be extended to minimize the loader travel distance. Primary (jaw crusher) and secondary crushing would be conducted at the plant production area. In addition, the screening plant(s) associated with the crusher(s) would be equipped with polyurethane/rubber screen fabric, which produces less noise than metal when aggregate particles come in contact with the screens as part of the production process. Manufacturer's literature (Polydeck Screen Corporation) based on a field production trial indicates that a noise reduction of 50%, or 10 decibels can be expected when utilizing these screens.

Concrete and asphalt materials hauled to the site from projects being constructed would be stockpiled for recycling. The asphalt recycling stockpiles would initially be at grade and positioned west of the base course stockpiles southwest of the asphalt plant. This would obscure the view of the asphalt stockpile from Lake Helena Drive. The concrete recycling stockpiles would initially remain at HS&G's Canyon Ferry or Big Sky operations. Once the plant site and crusher pad elevations are established at 15 and 20 feet below grade, respectively, both the asphalt and concrete recycling stockpiles would be placed at the crusher pad elevation to obscure the view of them from surrounding areas.

The property boundary is currently fenced and cattle guards would be placed on the access road to prevent livestock access. Trees and shrubs would be planted along the perimeter of the property area in the sections needed to reduce any visible or audible impact to the distant neighboring residences. Specifically, a hedge of either lilacs or caraganas would be planted in the southwest corner of the property, as a visual/audible barrier from the LaCasa Grande subdivision. In addition, trees, shrubs and native grasses would be planted along Lake Helena Drive to create a visually appealing entrance into the permit area. A drip irrigation system would be installed to provide necessary water and temporary fencing would be used to protect the trees and seeded areas for at least two growing seasons

Water Sources: Water for operations would be generated or used from the following on-site sources: stormwater runoff, recycled gravel wash water, and well water. In addition, upon approval of the Bureau of Reclamation, water would also be purchased from the Helena Valley Irrigation District. This water source would typically be available from March 20 to December 9 and would be used primarily for crusher/wash plant operations. Use of water from the irrigation district would reduce the amount of water that would otherwise need to be obtained from on-site sources. HS&G will not use its existing water right to obtain water from Prickly Pear Creek.

Chemical Storage and Handling: Fuel and asphalt liquids would be stored in aboveground single-wall steel storage tanks. These tanks would be placed in concrete secondary containment enclosures. Temporary storage tanks used during the portable crushing/screening operations would be placed in secondary containment pits lined with sheet plastic. HS&G has prepared a Spill, Prevention, Control and Countermeasures Plan (SPCC) that addresses handling solvents, wash-water, and wastes associated with the asphalt plant, concrete plant and truck use (HS&G 2007c).

Truck traffic: Traffic in and out of the pit area would be restricted to a single access point on Lake Helena Drive (Figure 2). Approximately 20,000 off-site deliveries of product, which results in 40,000 one-way trips would be made each year. Typical commercial traffic includes 10-cubic yard mixers, 12-cubic yard dump trucks and 24-cubic yard dump truck/trailer combinations.

Hours of operation: Following review of public comments on the draft EA, HS&G contracted Big Sky Acoustics, LLC (BSA) to perform an environmental noise study assessing the proposed operation. Based on results of this study (BSA 2008), HS&G redesigned the operational layout with the goal of meeting the U.S. Environmental Protection Agency (EPA) outdoor noise level of less than or equal to 55 day/night A-weighted decibels (dBA). EPA determined this noise level is protective of public health and welfare in residential areas and other places where quiet is a basis for use (EPA 1979). Based on

the noise study and revised facility layout, HS&G (2008b) revised the hours of operation proposed for this site. HS&G and the DEQ have further agreed to modify the hours of operation as follows:

a. Except as provided in c and d below and in condition 6e, the crushing, gravel extraction, stripping, grading, and site development activities may be conducted only from 7:00 a.m. to 7:00 p.m., Monday through Friday. In addition, these operations may be conducted on Saturday if Saturday operations are necessary to meet a contract deadline or other exigent circumstances. Saturday operations must be limited to the time necessary to meet the contract deadline or other exigent circumstances but may not be conducted before 10:00 am or after 6:00 p.m.. These activities may not be conducted on Sundays.

b. Except as provided in c and d below, the concrete batch plant and the asphalt plant, or both plants, may be operated only from 5:00 a.m. to 8:00 p.m., Monday through Friday. In addition, these operations may be conducted on Saturday if Saturday operations are necessary to meet a contract deadline or other exigent circumstances. Saturday operation of the concrete batch plant must be limited to the time necessary to meet the contract deadline or other exigent circumstances but may not be conducted before 7:00 am or after 5:00 p.m. Saturday operation of the asphalt plant must be limited to the time necessary to meet the contract deadline or other exigent circumstance but may not be conducted before 10:00 am or after 6:00 pm. Neither the concrete batch plant nor the asphalt plant may be operated on Sundays.

c. The permittee may request a temporary variance from the limits in a and b to meet a contract deadline or other exigent circumstance. The request must describe the activities, the proposed hours of operation, the duration of the variance, and methods permittee will use to notify the public of the modified schedule. Permittee may operate under the modified schedule only if the Department, after consulting with the Lewis and Clark County Commissioners, approves the variance.

d. Before granting the request, DEQ may require permittee to provide noise monitoring data. After notice and a public hearing and consultation with the county commissioners, DEQ may extend the operating hours.

The transmittal letter for HS&G's Plan of Operations (2008b) explains that they "frequently are requested to supply concrete for government and private customers in the summer/fall, sometimes starting as early as midnight, in order for the contractors to take advantage of cool nighttime ambient temperatures and higher relative humidity to assist them with early concrete curing to prevent shrinkage cracking of concrete slabs. The asphalt plant occasionally is required, sometimes by contract, to supply hot asphalt mix to contractors to pave critical portions of projects at night to take advantage of low traffic volumes on major streets and arterials, as well as the Helena Regional Airport."

Reclamation: The site would be reclaimed to pasture land for grazing livestock with a wheatgrass seed mix. The reclaimed surface would be sloped from the undisturbed surrounding ground into the pasture bowl to a depth of approximately 40 feet (or to within 5 feet of the water table as determined by groundwater monitoring data). The reclaimed side slopes would be at a gradient of 4:1 or flatter.

HS&G would alleviate compaction by ripping compacted surfaces and replace 6-8" of topsoil, which would be disked prior to seeding. The office/facilities area and all internal roads would be reclaimed by removing surfacing material, ripping, scarifying, topsoiling and seeding. Fertilizer would be applied at the time of seeding. No mulch would be used.

Section II: Agency Responses to Public Comments on the Draft EA

This section provides a summary of the comments received from 148 individuals, groups, or agencies during the public involvement period of November 7, 2007 through January 4, 2008. This section also presents DEQ's responses to these public comments. Attachment 2 provides a compilation of the public comments.

Aesthetics

Air Quality

Economics

Health and Safety

Hours Of Operation

Land Use

MEPA Documentation

Mitigation Measures

Noise and Light

Property Values

Recreation

Soils

Traffic Safety and Highway Impacts

Vegetation

Water Quality

Water Quantity

Wildlife

1. Aesthetics (EA Section III.8)

- a. COMMENT: A new industrial operation would create a negative visual impact to residents in the area due to industrial equipment, and excavation.

RESPONDENTS: 15, 64, 103, 107, 116, 125, 144, 148 (Attachment 2)

RESPONSE: HS&G has proposed measures to lessen impacts to aesthetics as part of the Proposed Action. Mitigations such as hours of operation, visual screening, storing concrete and asphalt awaiting recycling where they would be less visible, and reclaiming areas no longer needed for mining would reduce the impact of this operation. While some impacts cannot be avoided, restrictions placed on the permit would make reasonable reductions in the impact to local aesthetics. The permit area is surrounded by a 1,000-foot buffer zone to minimize potential impacts to adjacent residences. The crusher would be placed on a pad 20 feet below grade and the concrete batch plant and the asphalt hot plant would be set 15 feet below grade to reduce aesthetic and noise impacts.

A 12-foot high topsoil berm or berms would be constructed along the Valley Drive side of the permit area using topsoil salvaged as the site is developed (Figure 2). The berm would be vegetated, and watered using a drip irrigation system. A 25-foot high horseshoe-shaped berm of sand and gravel materials would be constructed around the crusher pad on the existing grade. HS&G reports that the materials used to construct this berm do not contain much silt, and therefore are not likely to be a source of airborne dust. However, if wind-transport of dust is a problem, HS&G would keep the berm moist pending application of a coating of tackifying agent to bind the surface particles and prevent wind erosion of the pile. In addition, HS&G proposes to plant trees and shrubs

along segments of the property perimeter as needed to mitigate visual impacts on neighboring residences. Specifically, a hedge of either lilacs or caraganas would be planted on the southwest corner of the property, as a visual/audible barrier from the La Casa Grande subdivision. In addition, trees, shrubs and native grasses would be planted along Lake Helena Drive to create a visually appealing entrance into the permit area. Temporary fencing would be used to protect plantings and seeded areas through at least two growing seasons. The property boundary is currently fenced and cattle guards would be placed on the access road to prevent any livestock access. After operations cease, reclamation would bring the excavated area to a sloped dry pasture bowl with a maximum depth of approximately 40 feet.

- b. COMMENT: The two current HS&G pits have junk vehicles, used tires, mountains of junk concrete, oil barrels and junk heavy equipment. Would there be any measures in place to prevent such eyesores?

RESPONDENT: 28 (Attachment 2)

RESPONSE: Any junk vehicles, equipment, tires and equipment would be stored in the sub-grade facility area and would be further screened by berms and vegetation. These items would be removed prior to reclamation. While site facilities are being developed, stockpiles of concrete and asphalt awaiting recycling would be stored out of sight, to the extent feasible. Upon completion of facility construction, the stockpiles would be located in the crusher pad area at a depth of 20 feet below grade. These stockpiles must be kept out of surface and ground water.

- c. COMMENT: The smell of the batch plant is inappropriate and undesirable for a residential neighborhood.

RESPONDENTS: 47, 115, and 133 (Attachment 2)

RESPONSE: The aesthetic impacts from asphalt batch plants are the result of “blue smoke”, which is caused by tiny droplets of petroleum in emissions from the plant. HS&G would install a blue smoke control unit as part of the asphalt batch plant. This would significantly reduce odors from the plant.

- d. COMMENT: The operation would be prominent and highly visible from the surrounding subdivisions. How much of the cones and the structures of the gravel operation would be visible above the surface level?

RESPONDENTS: 47 and 148 (Attachment 2)

RESPONSE: The portions of these operations that would remain above grade are as follows:

- The tallest structure would be the hot elevator and mix storage silos on the asphalt plant. Approximately 60 feet would extend above the existing grade.
- The radial stacking conveyor(s) used to build the aggregate stockpiles (base aggregates & concrete sand) are the tallest “structures” associated with the crushing operations. These conveyors are temporary and would extend 20 feet above the existing grade.
- The tallest structure associated with the crushing plant would be the cement silo. About 55 feet of this structure would be above grade.

- e. COMMENT: The proposed berms would appear as giant scars on the landscape during operations and the site would be a 40-foot deep hole in the ground after mining ceases. These would be eye sores to all.

RESPONDENTS: 75 and 148 (Attachment 2)

RESPONSE: The topsoil berms along the west side of the permit area would be vegetated with grasses and irrigated. The 25-foot high sand and gravel berm around the crusher area would exhibit a rocky appearance. These berms would create a contrast to the more level ground that currently exists at the site, but grass on the topsoil berms would be typical of this area, and the rocky berm would not be a unique sight in this semi-arid region. The site would be reclaimed with side slopes of 4:1, creating a gently-sloped bowl rather than a hole with straight highwalls. Slopes would be topsoiled and revegetated with a grass seed mixture. The site would be protected for at least two years after being planted to ensure vegetation success.

2. Air Quality (EA Section III.3)

- a. COMMENTS: The proposed pit would be a new air pollution source that could degrade air quality within the permit area. Anything that could potentially cause air quality to degrade shouldn't be an option. A reasonable and protective air quality protection plan should be shared with residents prior to the issuance of any permit. The draft EA should be revised to include adequate analysis of the expected level of additional air pollution produced as a result of this operation and the expected effectiveness of the proposed mitigation measures.

RESPONDENTS: 1, 3, 7, 27, 35, 37, 47, 51, 52, 64, 72, 96, 97, 107, 125, 133, 137, 143, 144 and 145 (Attachment 2)

RESPONSE: The crushing operation, asphalt plant, and concrete plant must comply with state air quality standards and permitting requirements. This equipment would require an air quality permit from the DEQ's Air Resources Management Bureau. The air permit would limit emissions of particulate matter, nitrogen oxides, carbon monoxide, sulfur dioxide and volatile organic compounds (VOCs). The air quality permits issued by DEQ require using emissions control devices, including water and spray bars for dust controls, and includes opacity limitations. Air quality rules also require reasonable precautions to control dust. These requirements protect air quality and human health.

- b. COMMENTS: The draft EA discussed stockpiling metals-contaminated soils and re-spreading them during reclamation efforts. These activities and preparatory efforts for reclamation, including disking and scarification would generate fugitive dust that pose a risk to downwind residents, people walking along the road or canal, and school children at play. East Helena is an EPA-designated non-attainment area for lead and sulfur dioxide. Moving metals-contaminated soils around would generate toxic dust driven into the air by wind and redistributed to areas around the site, including Eastgate's sewage lagoon and effluent field. Should toxic dust settle in the effluent field and/or sewage lagoon, these facilities may be rendered useless, resulting in their shut down.

RESPONDENTS: 2, 9, 10, 22, 26, 31, 45, 47, 65, 74, 79, 98, 101, 105, 115, 121, 126, 146 and 148 (Attachment 2)

RESPONSE: The proposed permit area is located within the administrative boundaries of the East Helena Superfund site related to the historic ASARCO lead smelting operations. The non-attainment designation for East Helena has been traced to the ASARCO lead smelter, American Chemet facility, road dust, and automobile emissions. Operations at the proposed Lake Helena Drive (LHD) Pit has the potential to contribute particulate matter to the local airshed.

Surface soils in this area represent a potential source of metals-impacted dust. Sampling and laboratory analysis of surface soils within the proposed permit area conducted in October 2007 indicated that lead concentrations in excess of the EPA action/screening level of 500 parts per million (ppm) are present. As requested by LEAP, HS&G has developed and implemented a work plan to conduct additional soil sampling and analysis that would further define the extent and magnitude of areas with elevated lead concentrations prior to site disturbance (TetraTech 2008). HS&G has also developed a Dust Mitigation Plan (HS&G 2008a) (Attachment 3) to mitigate topsoil dust during stripping activities, berm stockpiling and road construction (Attachment 3). This plan has been approved by the Lewis & Clark County Health Department's East Helena Lead Education and Abatement Program (LEAP) (2008) and the DEQ Superfund program (DEQ 2008). Implementation of the Dust Mitigation Plan would be a requirement of HS&G's opencut mining permit.

Implementation of the Dust Mitigation Plan would mitigate metals-impacted topsoil dust during stripping activities, berm stockpiling and road construction. To limit generation of dust during other site operations, HS&G would pave the access road off Lake Helena Drive within two years of commencing asphalt hot mix production at the site, and apply water to other pit areas whenever necessary to control dust. Surface application of water is a common dust mitigation measure successfully used at numerous mining and construction sites and is required as a reasonable precaution under air quality rules.

- c. COMMENTS: Fugitive dust would be a daily reality. The dust would make its way into my home. I don't think they can use water 24/7 to control dust. What happens in the winter when the temperature drops below freezing? How can HS&G control dust with water then? They said they would not use chemicals.

RESPONDENTS: 4, 6, 10, 12, 14, 16, 17, 56, 71, 77, 97, 108, 119, 128, 134, 135 and 148 (Attachment 2)

RESPONSE: Implementation of HS&G's Dust Mitigation Plan (Attachment 3) would mitigate metals-impacted topsoil dust during stripping activities, berm stockpiling and road construction, and would be a requirement of HS&G's opencut mining permit. To limit generation of dust during other site operations, HS&G would pave the access road off Lake Helena Drive and the immediate area around the plant facilities, and apply water to other pit areas whenever necessary to control dust. Surface application of water is a common dust mitigation measure successfully used at numerous mining and construction sites. As discussed in the response to comment 2a, the air quality permits issued by DEQ require using emissions control devices, including water and spray bars for dust controls, and includes opacity limitations. Air quality rules also require reasonable precautions to control dust.

- d. COMMENTS: The asphalt batch plant would discharge asphalt hydrocarbons to the air and degrade air quality. What about the diesel fumes and carbon monoxide from idling engines and the additional traffic generated to and from the site?

RESPONDENTS: 4, 6, 9, 15, 30 and 47 (Attachment 2)

RESPONSE: The operator of the crushing operation, asphalt plant, and concrete plant must comply with state air quality standards and air permit requirements. HS&G would install a "blue smoke control" unit on the asphalt batch plant to control the emission of tiny droplets of petroleum in smoke that could create air quality and odor impacts. Such measures reduce opacity limits to as low as 5 percent. Additionally, modeling is conducted for such sources operating during the winter months, with further restrictions being imposed on facility production and hours of operation, if necessary. Operation of diesel trucks on private property or on public roadways does not require a permit from the DEQ Air Resources Management Bureau because they are mobile sources that do not require a permit under air quality administrative rules.

- e. COMMENTS: Monitoring needs to be required to document air quality levels at the site. Would HS&G be required to provide additional air quality baseline information?

RESPONDENTS: 84, 144 and 148 (Attachment 2)

RESPONSE: HS&G would need to comply with requirements of the DEQ air quality permits it obtains for its equipment and would have to document that it had done so. Air quality monitoring is not a requirement of air quality permits because conditions and limitations are established through modeling of air quality impacts and compliance is ensured through testing of equipment, recording and reporting of the results, and inspections by Department air quality personnel.

- f. COMMENTS: The health effects from air pollution and dust should be included and analyzed in the EA.

RESPONDENTS: 9, 25, 43, 46, 47, 48, 97 and 103 (Attachment 2)

RESPONSE: Public health is protected through limits and controls on dust and other emissions imposed through the Dust Mitigation Plan (2008a) and requirements of the air quality permits. Implementation of the Dust Mitigation Plan would be a requirement of HS&G's opencut mining permit.

- g. COMMENT: The Cumulative Impacts statement in the air quality section discusses historic use of machinery that have contributed to area dust conditions, however, no active agricultural activities have occurred on this site in at least the last twenty years.

RESPONDENTS: 9 (Attachment 2)

RESPONSE: Cumulative impacts take into account actions in the past as well as other activities in the surrounding areas. There are other agricultural activities in the Helena Valley that fall outside the Superfund Area that contribute to dust in the area.

3. Economics (EA Section III.21)

- a. COMMENTS: Would a reclamation bond be posted by HS&G?

RESPONDENTS: 19 and 84 (Attachment 2)

RESPONSE: A reclamation bond would be required to be posted by HS&G in conjunction with the openpit mining permit.

- b. COMMENT: Would this increase our property taxes?

RESPONDENTS: 96 and 135 (Attachment 2)

RESPONSE: The implementation of HS&G's proposed gravel pit should not increase property taxes. The City of East Helena and Lewis & Clark County use many factors to determine the need for increased taxes and the development of one new gravel pit and additional truck traffic would most likely not weigh heavily in those decisions.

- c. COMMENT: When roads or infrastructure need to be improved, who pays?

RESPONDENTS: 30, 31, 47 and 148 (Attachment 2)

RESPONSE: Generally, county roads are funded from county property tax levies. According to a Lake Helena Drive In-Place Typical Section analysis performed for HS&G, the current pavement thickness for Lake Helena Drive is acceptable for the potential increased truck traffic (Pioneer 2007, 2008). However, an analysis performed by the Montana Department of Transportation (MDT) indicated that an overlay to the pavement would likely be necessary during the life of the operation (MDT 2008). The Lewis & Clark County Public Works Department has permitting jurisdiction for the approach permit and would make any decision regarding paving requirements. Any compensation for road improvements needed because of the gravel operation would be arranged between the County and HS&G. According to MDT, the intersection of Canyon Ferry Road and Lake Helena Drive will not currently accommodate large truck turning movements (MDT 2008). If HS&G begins operations before MDT's improvements on Canyon Ferry Road are completed, MDT would recommend that HS&G submit design plans for MDT approval for some of the required intersection improvements at Lake Helena Drive. The traffic study done for HS&G makes similar recommendations (WWC 2008a,b). If HS&G chose to perform such work, it would also be responsible for coordinating the project with the remaining utilities. MDT plans to begin its Canyon Ferry Road improvement project in the spring of 2009, and this intersection will then be adequate after it is reconstructed. Some improvements may also be necessary for the intersection of Lake Helena Drive and Old Highway 12, but arrangements for any payment would be between the County and HS&G. There would not be any municipal sewer or water lines provided to this site.

4. Health and Safety (EA Section III.11)

- a. COMMENTS: How would HS&G ensure that children cannot access the pit? What kind of security would be around the pit? If surveillance cameras are being used then how often would the tapes be viewed? Would the tapes only be looked at if a child goes missing?

RESPONDENTS: 4, 18, 31 and 115 (Attachment 2)

RESPONSE: The site is currently fenced with barbed-wire and would remain so for the life of the operation. Warning signs would be posted along the perimeter of the HS&G property. In accordance with Mine Safety and Health Administration (MSHA) regulations earthen berms would be placed around portions of the pit where “high wall” conditions exist. HS&G has decided not use security cameras at the site.

- b. COMMENTS: Pollutants, noise, dust, water, lighting, road and bridge use, will be damaging. During the public meeting a man brought up his family's breathing issues and what impacts this might have on them. DEQ or HS&G need to take a closer look at this family's health conditions and require HS&G to either provide relocation for these individuals or minimize air quality impacts to levels which his family can live healthy. DEQ makes special steps to avoid harm to animals, shouldn't families' health concerns be important?

RESPONDENTS: 20 and 26 (Attachment 2)

RESPONSE: As discussed in the responses to comment on air quality, emissions limitations and controls will protect public health. The DEQ does not have authority to require HS&G to provide relocation costs in order to issue an opencut mining permit. Other impacts are addressed in other sections of this document.

- c. COMMENT: The reclaimed “bowl” with collected runoff water and the settling ponds would create a breeding ground for mosquitoes. The setting ponds would also have the potential to breed mosquitoes during operations.

RESPONDENT: 148 (Attachment 2)

RESPONSE: The reclaimed pasture bowl would be above the water table and would not contain water. Runoff water would discharge to the subsurface through the bottom of the reclaimed bowl. The water in the settling ponds would be continuously run through the gravel washing operation and would not represent a continual “standing” water source that would encourage mosquito larval growth.

- d. COMMENT: Are there any studies to show any correlation between placement of industrial activities in residential areas and an increase in crime in the area?

RESPONDENTS: 26 and 144 (Attachment 2)

RESPONSE: The DEQ is not aware of any studies that have correlated increased crime in a residential area with the placement of an aggregate mining operation. In any case, there is no indication that the facilities and operations associated with the Proposed Action would invite crime into the area.

- e. COMMENT: There is a concern about the safety of children at Eastgate Elementary School from heavy trucks passing by. The school would incur additional expenses to manage traffic safety in front of the school.

RESPONDENTS: 15, 18, 20, 114, 125 and 128.

RESPONSE: HS&G only plans to make local deliveries south on Lake Helena Drive during operations. Alternate routes may be necessary during MDT's improvements on

Canyon Ferry Road. Those routes have not yet been determined. Lake Helena Drive is a county road and is used by numerous types of trucks for local deliveries as well as the generally increasing residential population in the valley. HS&G has agreed to a permit condition that prohibits it from driving haul trucks past the Eastgate and Radley schools from 7:45 am to 9:00 am and from 3:00 pm to 4:00 pm on school days (See Section 22.C).

- f. COMMENT: HS&G proposed that they would bring cold millings onto the site to be used for recycled pavement. The draft EA fails to disclose how this material would be stored. Are cold millings hazardous material? If so, does HS&G meet current storage techniques meet requirements?

RESPONDENT: 144 (Attachment 2)

RESPONSE: Cold millings are the materials collected from grinding up pavement in advance of road resurfacing. They are not considered hazardous materials. Millings can be reused in paving material of a similar content, such as asphalt pavement. Asphalt millings and other asphalt debris for recycling can be stored on the ground as long as they do not come in contact with surface water or groundwater. HS&G plans to store these materials pending reuse and would not bury these materials on-site. Such temporary stockpiles of asphalt materials are allowed at open-cut mine sites and do not represent any more risk to human health than do asphalt roadways throughout the state.

5. Hours of Operation (EA Section III.8)

- a. COMMENTS: The hours of operation are not appropriate for a residential area. Lights and noise at night during operations would be a problem for people trying to sleep and could cause some health-related problems. The EA should include more analysis of the impact of noise and limit the hours of operation to more reasonable times like 7 a.m. to 8 or 9 p.m. DEQ has the authority under 17.24.218(1)(d) to restrict hours of operation, so please use it. Restrict truck traffic going south on Lake Helena Drive during school hours.

RESPONDENTS: 9, 16, 19, 22, 23, 25, 26, 28, 30, 31, 33, 47, 51, 56, 59, 64, 69, 79, 81, 97, 103, 108, 117, 121, 135, 144 and 148 (Attachment 2)

RESPONSE: Based on the environmental noise study assessing the proposed operation (BSA 2008), HS&G redesigned the operational layout with the goal of meeting the EPA outdoor noise level of 55 dBA or less. This level is protective of public health and welfare in residential areas and other places where quiet is a basis for use (EPA 1979). Based on the noise study and revised facility layout, HS&G (2008b) revised the hours of operation proposed for this site. Additionally, HS&G has agreed to a permit condition further limiting hours of operation (See Section 22.C).

The proposed permit area containing the mining and pit operations would have a minimum 1,000-foot buffer between it and the nearest residences. Using back-up strobe lights after dark instead of audible alarms would also mitigate disturbance. DEQ will add to the permit a condition that requires lights to be downward directed and aimed at the work area.

HS&G has agreed to a permit condition that prohibits it from driving haul trucks past the Eastgate and Radley schools from 7:45 am to 9:00 am and from 3:00 pm to 4:00 pm on school days.

6. Land Use (EA Section III.12)

- a. COMMENT: Determine what impact the proposed gravel pit at this located will have on urban sprawl. A current zoning board is working on getting Lewis & Clark County out of interim zoning and into a full fledged zoning plan. The current plan has the proposed zoning for the area in question identified as a residential/community center.

RESPONDENTS: 26, 51, 55, 123 and 144, (Attachment 2)

RESPONSE: Urban sprawl is defined as the unplanned spread of residential growth on the edges of cities. This gravel pit would occur in an area that is currently not zoned and is developing residentially. The gravel pit would become part of the growth of the area. The DEQ does not have the authority to restrict land use of private land in areas that are not zoned for a particular use. The county submitted a zoning compliance form to DEQ stating that the proposed permit area is in the Helena Valley Interim Zoning District (Lewis & Clark 2007a). The Zoning District does not prohibit this type of use for the property.

- b. COMMENTS: This area is residential and agricultural and should not be expected to accommodate an industrial facility.

RESPONDENTS: 9, 26, 44, 47, 51, 55, 67, 70, 77, 81, 89, 107, 113, 123, 144 and 148 (Attachment 2)

RESPONSE: There is no current prohibition on the use of the property for a gravel mine as described above regarding zoning. Mitigation measures have been developed to mitigate impacts on surrounding residential areas. HS&G must comply with the Opencut Mining Act and all permit conditions, should this permit be approved.

- c. COMMENTS: The existing land use is pasture land, not fallow. This site has no use as long as my memory serves me. I've never seen agricultural equipment on this site. You based the draft EA on land use from many years ago rather than current conditions.

RESPONDENTS: 9, 47, 81 and 148 (Attachment 2)

RESPONSE: The site is currently an open grassy field that appears to have been irrigated in the past. It has been used for grazing livestock. It is not currently a cultivated field. The EA addresses the land use of the proposed site as well as the surrounding area which includes residential areas as well as agricultural areas, some of which are cultivated and other which are either pasture or hay fields. Environmental documents have to look at past uses as well as current uses to address impacts. For example, past irrigation of the site may have contributed to the current distribution of metals-impacted soil at the site. If we were to ignore that fact we could not fully address that impact.

7. Lifestyle (EA Section III.19)

- a. COMMENT: Given that this area is essentially a residential community, the operation of this proposed industrial facility would disrupt the normal community lifestyle.

RESPONDENT: 9 (Attachment 2)

RESPONSE: Local people would notice a change in the daily operations at the site as topsoil is stripped and placed into berms and gravel is extracted, crushed and placed into stockpiles. This change in land use during the term of the operation could be perceived as a disruption of traditional residential lifestyles. Restrictions on hours of operation, visual and noise mitigations, and other restrictions are designed to minimize impacts to residential areas.

8. MEPA Documentation

- a. COMMENTS: An environmental assessment is an inadequate level of analysis. An Environmental Impact Statement (EIS) should be performed to analyze the Proposed Action.

RESPONDENTS: 2, 4, 8, 9, 10, 39, 57, 105, 109, 120, 123, and 129 (Attachment 2)

RESPONSE: It is the opinion of the DEQ that all impacts of this operation will be mitigated below the level of significance. An EIS is only performed if there are significant impacts found that cannot be mitigated below the level of significance.

- b. COMMENT: A more detailed EA should be prepared and released to the public for review before the final EA is released. There are too many errors in the draft EA and it should be fixed and new one released for additional public review and comment. I would like to see the EA completely rewritten to fully document HS&G's full plan and clearly identify what the expansion of this operation would be and what future permits would be required, and what impacts would need to be mitigated.

RESPONDENTS: 2, 4, 8, 9, 10, 11, 35, 42, 46, 51, 57, 60, 64, 77, 90, 91, 93, 97, 119, 127, 128, 138, 139, 144 and 147 (Attachment 2)

RESPONSE: The purpose for releasing a draft EA for public review is to see if it adequately addresses the public's concerns with the proposed project. It is typical between draft and final EAs that new mitigations are developed to address issues raised by the public to further reduce impacts and this does not require a new comment period. HS&G has not applied to mine the full property. If HS&G proposes to expand the operation, it must submit an application for an amendment to the permit. An amendment application is reviewed under the same process that applies to an application for a new permit, including additional MEPA analysis.

- c. COMMENTS: There is not enough baseline information in the draft EA, or the information included did not have the accuracy to make a determination of the significance of impacts.

RESPONDENTS: 2, 4, 8, 9, 10, 11, 19, 35, 39, 40, 44, 51, 56, 57, 60, 64, 68, 73, 77, 82, 90, 91, 92, 93, 94, 97, 98, 99, 105, 110, 117, 119, 120, 124, 125, 127, 128, 129, 130, 132, 138, 140, 141, 142 and 147 (Attachment 2)

RESPONSE: With the benefit of the public comment process, DEQ has identified any inconsistencies or mistakes in the draft EA and corrected them for this final EA. Although not determined necessary or requested by DEQ, HS&G provided the following documents:

- Environmental Noise Study (BSA 2008),
- Traffic Impact Study (WWC 2008a,b),

- In-Place Typical Section (pavement) study for Lake Helena Drive (Pioneer 2007, 2008).

HS&G also developed the following mitigation plans for dust and groundwater protection:

- Dust Mitigation Plan (Attachment 3), and
- Groundwater Sampling and Analysis & Contaminant Detection Response Plan (TetraTech 2008) (Attachment 4)

In addition, as requested by LEAP, a work plan to perform additional surface soil sampling and analysis was prepared (TetraTech 2008a) for implementation prior to any site disturbance (see the Soils comments section below).

- d. COMMENTS: The public was not adequately notified of the Proposed Action, release of the draft EA, and the pending decision by the DEQ.

RESPONDENTS: 2, 9, 10, 49, 50, 100, 144 and 148 (Attachment 2)

RESPONSE: DEQ is responsible under MEPA to provide for reasonable public input by including the opportunity for public comment, a public meeting or hearing, and adequate notice. In this case, DEQ posted the draft EA to the DEQ website and mailed it to federal, state, and local officials on November 7, 2007; and a legal notice was published in the Helena Independent Record on November 14 and 25, 2007.

The public comment period was originally scheduled to end December 7, 2007, but due to requests from the public DEQ extended the public comment period until Friday, January 4, 2008. On December 7, 2007, DEQ issued a press release announcing this extension and informing the public of an informational meeting scheduled for December 18, 2007 at Eastgate Elementary School in East Helena. At the public meeting, representatives of the Department's Opencut, MEPA, Air Quality, Superfund, and Public Water Supply Programs provided information about the EA and mine permitting process, other permits and agency responsibilities, and answered questions posed the public. Representatives of HS&G and the Department of Natural Resources and Conservation also provided information at the meeting and answered questions from the public. The DEQ provided forms for written comments at the meeting and accepted written comments at that time. An estimated 300 persons attended that public meeting.

There is no requirement for DEQ to notify adjacent landowners in the vicinity of a proposed operation in the Opencut Mining Act although DEQ provides the applicant with an optional Landowner Notification form to give landowners within 1,000 feet of the permit boundary. Since HS&G has placed a 1,000-foot buffer around the property boundary, they chose not to submit the optional form to adjacent landowners.

- e. COMMENTS: Improvements or mitigations identified in the more detailed EA should then be included as conditions of HS&G's permit. The EA mentions certain requirements "as needed" or "as determined necessary". Who would make those decisions and under what circumstances is unclear. HS&G says that they are planning to do things not required but how can those things be enforced? Is it easier to get a secondary permit [or permit expansion] once they have the first one?

RESPONDENTS: 2, 10, 19, 22, 99, and 144 (Attachment 2)

RESPONSE: If HS&G makes a commitment to certain mitigations in its Plan of Operations, then those mitigations are enforceable by DEQ. DEQ can require certain mitigations as allowed under the Opencut Mining Act in the Agency-Modified Alternative. DEQ can suggest other mitigations, such as upgrading a roadway outside the permit area to improve traffic safety, but does not have the authority to mandate such an action. If HS&G consents to include such a voluntary mitigation in the permit conditions, then it becomes enforceable. If HS&G proposes to expand the operation, it must submit an application for an amendment to the permit. An amendment application is reviewed under the same process that applies to an application for a new permit, including additional MEPA analysis.

- f. COMMENTS: The cumulative impacts analysis did not include the Garber Ranch subdivision, HS&G's Foster site or the potential for mining the entirety of HS&G's LHD property in the future.

RESPONDENTS: 9, 10, 11, 26, 30, 39, 64 and 39 (Attachment 2)

RESPONSE: The cumulative impacts analysis for the final EA did not include the Garber Ranch subdivision (Red Fox) because it has been denied by the Lewis & Clark County Planning Department and no other application has been filed. The HS&G Foster site was not included in the cumulative effects because there is no plan to develop this site at this time. The potential for mining the entirety of the HS&G property at LHD was not included because HS&G did not apply to mine the entire property only the 111 acres in the center of the property. If HS&G proposes to expand the operation, it will be required to submit an application for an amendment to the permit. An amendment application is reviewed under the same process that applies to an application for a new permit, including additional MEPA analysis.

- g. COMMENT: DEQ did not follow the process in 75-1-206, MCA, when multiple applications or permits are required from one or more agencies to produce a combined MEPA analysis document.

RESPONDENTS: 9 and 64 (Attachment 2)

RESPONSE: This section of state law addresses when an EIS is prepared and multiple agencies are involved. A lead agency is appointed and the fees collected to prepare the EIS are allocated and dispersed between the agencies involved. Since this is an EA, this portion of the law does not apply.

- h. COMMENT: The Constitution of the State of Montana guarantees us the right to a clean healthful environment.

RESPONDENTS: 66 and 121 (Attachment 2)

RESPONSE: The Plan of Operation and permit conditions protect the surrounding resident's right to a clean and healthful environment.

- i. COMMENT: DEQ has not followed MEPA.

RESPONDENT: 105 (Attachment 2)

RESPONSE: The public was provided nearly 8 weeks to review the draft. A typical comment period is 30 days or less. A public information meeting was held to provide additional information and answer questions. Additional information was obtained between the draft and final EA by HS&G and analyzed by DEQ and its third party contractor. Changes were made to the document to correct errors, add mitigations and new permit conditions, and modify HS&G's Plan of Operations. These are all items either required or allowed under MEPA. See other MEPA comments and questions above for more information about EISs, public notification, permit conditions, and collection of baseline information.

9. Mitigation Measures

- a.** COMMENTS: The berms and vegetation proposed to block the view of the facility and provide a sound/light barrier would not be adequate. The vegetation would not grow adequately as proposed. Vegetation must be planted immediately and berms constructed on the north, south and west sides of the operation.

RESPONDENTS: 9, 19, 24, 28, 70, 75, 97 and 144 (Attachment 2)

RESPONSE: The Proposed Action would include a 12-foot high berm along the Valley Drive side of the permit area, a 25-foot high horseshoe-shaped berm around the crusher/loading area pad and a 20-foot high materials stockpile between the crusher/loading area pad and the asphalt/concrete plant pad. In response to public concerns HS&G has also increased the depth of the pad on which the crusher would be placed to 20 feet below grade and DEQ has agreed to modify its hours of operations (see Section 22.C), which would further mitigate noise impacts

HS&G's Plan of Operations (HS&G 2008b) specifically commits it to planting a hedge of either lilacs or caraganas along the southwest corner of the property as a visual/audible barrier from the LaCasa Grande subdivision, and trees and shrubs would be planted along Lake Helena Drive. DEQ is adding to the permit a condition requiring that vegetation be maintained.

The Opencut Mining Act grants DEQ the authority to require placement of berms and vegetation screens within the permit boundary as required to minimize noise and visual impacts on residential areas to the degree practicable. During preparation of this final EA, DEQ staff viewed the proposed mine site from accessible adjoining properties. Staff observed that existing berms bounding the Helena Valley Canal along the north side of the property already obscure the view from the north, and the 1,000 foot buffer zone and existing topographic slopes diminish the view from other areas to some extent. While it is difficult to foresee every view and perspective that multiple neighboring landowners will have of a facility that has not yet been constructed, based on this inspection, DEQ believes the mitigations proposed by HS&G are reasonable. However, HS&G has agreed to a permit condition requiring it to plant, maintain, and, if necessary, replace vegetation on berms and vegetation planted for visual screening as determined necessary by the DEQ to minimize visual impacts on residential areas to the degree practicable (See Section 22.C).

- b.** COMMENTS: HS&G should account for the irrigation water to be used for the plantings and berm vegetation. The irrigation system for the trees and berms should be left in place for the life of the pit to increase the chances of the trees survival and they should plant trees that are at least 5 years old. Hydroseeding alone will not hold the soil in place until plants are

established. Vegetation will not effectively deaden sound and sound will wrap around the end of berms.

RESPONDENTS: 9, 19, 37, 47, 56, 144, and 148 (Attachment 2)

HS&G intends to install an irrigation system for the vegetation screens and on the topsoil berms to help vegetation get established. Maintaining the vegetation is included in the Plan of Operations and has been added as a condition of the operations permit.

It is difficult to estimate the amount of water needed for irrigation as some of the irrigation may involve a drip system for trees and shrubs while the berms would most likely be irrigated with overhead sprinklers. Mulch emplaced during hydroseeding would cover the topsoil berms and prevent wind erosion until vegetation is established. DEQ agrees that vegetation has limited potential to deaden sound. HS&G has proposed and would implement other mitigation measures to limit noise impacts to residential areas, such as berms and locating facilities below grade (see Item 10 - Noise and Light below, and EA Section III.8 – Aesthetics).

- c. COMMENTS: This location warrants far more than the simple use of water to control dust, yet in the EA there is no discussion of plans to add wetting agents to the process as a means of improving the water's ability to wet and agglomerate fine particles. I assume the plan is to wet locations with a water truck. Knowing demands placed on said trucks, I recommend that some type of automated system be installed.

RESPONDENT: 26

RESPONSE: HS&G's Plan of Operation (HS&G 2008b) indicates water would be used for dust control but a tackifying agent may be used on berms and soil piles if blowing dust becomes a problem. HS&G plans to use water trucks for roads and pit floors, and irrigation systems for vegetation. If blowing dust becomes a problem at the site, DEQ would inspect the site and could issue a violation. An automated system for dust control might work in some areas of a gravel mine, such as along an access road or on berms, but in working areas there are typically too many travel paths and changes in the configuration of the pit floor to set up an automated system of pipes and sprinklers.

- d. COMMENTS: HS&G should be required to follow-through with mitigation measures. The extent and scope of mitigations should be detailed with the advice and approval of those parties directly impacted. Require that HS&G monitor or regularly evaluate noise and dust, the water quality in surrounding wells and the level of the water table, soil samples, road wear and tear, etc. to assure that the impact of the operation coincides with what is outlined in the EA and that current regulations are upheld. What kind of complaint process does the public have to ensure that HS&G holds up their end of the deal?

RESPONDENTS: 19, 26, 56, 63, 73, 75 and 106 (Attachment 2)

RESPONSE: Whether mitigation measures are proposed by HS&G in its Plan of Operations or contained in permit conditions, they become enforceable conditions of the opencut mining permit. The EA process discloses impacts and invites public input, but the Opencut Mining Act provides DEQ with the sole authority to establish permit conditions. Many operating plan changes and permit conditions have been made to mitigate impacts of concern to the public.

HS&G has included plans for monitoring water quality and the level of the water table (TetraTech 2008b,c). Soil would be tested for contaminants prior to removal and stockpiling on-site. While there are no legislatively-mandated standards for noise, HS&G has agreed to a permit condition limiting the hours of operation, including the requirement to collect data to show DEQ that their sound mitigations were effective prior to any permanent extension of their hours of operation (See Section 22.C). HS&G has also agreed to a permit condition regulating noise levels (See Section 22.C). The county would be responsible for determining when Lake Helena Drive needed to be resurfaced.

DEQ responds to complaints about potential violations of the opencut permit, including berms, vegetation, hours of operation, groundwater quality, and reclamation work, as well as potential violations of the air permit that would eventually be required for the site, including excessive dust or smoke. Inspections are conducted and failure to comply with the opencut permit, air quality permit and standards, and any other permits that would be issued by DEQ could result in enforcement actions and possible penalties under one or more statutes.

Citizen complaints regarding aspects of the operation discussed in this EA, but over which DEQ has no regulatory authority would be the responsibility of other governmental agencies to the extent that pertinent laws allow. For example, DEQ does not have the expertise, knowledge, or any legal authority to regulate roadway design or traffic safety standards. However, depending on the project location, permits allowing and regulating the operator's access to public roadways may be issued by local or county government agencies and/or MDT. For example, if applicable laws require the operator to obtain water rights to supply site activities they must comply with statutes administered by the Montana Department of Natural Resources and Conservation (DNRC). However, HS&G has agreed to a permit condition that will limit groundwater usage by limiting the purposes for which groundwater can be used and require monitoring to determine if groundwater levels are lowering.

10. Noise and Light (EA Section III.8)

- a. COMMENT: Noise pollution will go up and would be irritating. Noise from the equipment and trucks would disrupt nearby residents. Sounds would be noticeable so close to our home. Why was the use of compression breaks not mentioned in the draft EA?

RESPONDENTS: 1, 4, 5, 6, 9, 10, 14, 15, 17, 19, 21, 26, 27, 31, 34, 44, 47, 48, 51, 64, 72, 79, 96, 104, 125, 126, 128, 134, 137, 144, 146 and 148 (Attachment 2)

RESPONSE: The Opencut Mining Act does not include specific standards for noise or light levels. However, the Act does require that noise and visual impacts on residential areas should be minimized to the degree practicable through berms, vegetation screens, and reasonable limits on hours of operation, [82-4-434(2)(o), MCA]. In response to public comments on the draft EA, HS&G commissioned an Environmental Noise Study to determine the levels of noise that would be produced by site operations (BSA 2008). More detailed information on results of the study can be found in Section III.8. Based on findings of the study, HS&G would institute the following site design, development, and operational practices to minimize noise levels:

- Topsoil berms would be constructed on the Valley Drive side of the permit area.
- The crusher, asphalt plant and concrete plant would be more than 1,000 feet from the nearest residences and would be set 20 and 15 feet, respectively, below grade.

- A 25-foot high horseshoe-shaped berm would be constructed around the crusher/loading area pad and a 20-foot high materials stockpile would be constructed between the crusher/loading area pad and the asphalt/concrete plant pad.
- Insulation and rubber screens would be installed on crushing equipment.
- Strobe lights would be utilized as truck back-up alarms instead of an audible signal during nighttime operations.

In addition, HS&G has agreed to permit conditions regulating the hours of operation and noise levels (See Section 22.C).

The use of compression breaks by trucks slowing down is not under the control of DEQ. However, HS&G has agreed to a permit condition that prohibits use of compression brakes on Lake Helena Drive, the intersection of Canyon Ferry Road and Lake Helena Drive, Old Highway 12, and the intersection of Highway 12 and Old Highway 12 except in emergency situations.

- b. COMMENTS: The EA does not provide analysis of the effectiveness of noise/light suppression mitigation measures recommended. Considering the anticipated decibel levels produced not only by the stationary equipment, but also by the mobile mining equipment, the potential impacts associated with loss of sleep by area residents and the nuisance of this site will be a significant impact on the existing community. The noise will disrupt our sleep. The noise of the trucks will keep us awake or wake us up.

RESPONDENTS: 1, 4, 17, 31, 34, and 64 (Attachment 2)

RESPONSE: HS&G provided additional data and more in-depth analysis of sound levels anticipated at the site during mining operations (BSA 2008). HS&G has incorporated additional mitigations into its Plan of Operations (HS&G 2008b). As discussed above in the preceding response, HS&G has agreed to a permit condition regulating hours of operation. HS&G has also agreed to a permit condition requiring it to monitor sound levels at four established monitoring locations semiannually and maintain the noise levels at or below the 55 L_{dn} level and certain 10- minute interval sound levels (See Section 22.C). Monitoring would continue for five years or until HS&G establishes a continuous and consistent record of compliance, whichever occurs later. Should HS&G wish to expand hours, DEQ would assess the effectiveness of sound mitigations and could require additional monitoring before authorizing any extension of crusher operating hours (Section 22.C). See response to comment 10a pertaining to light.

- c. COMMENT: HS&G does not have information about how much noise would be generated. A noise study should be done to provide baseline data.

RESPONDENTS: 9, 15, 19, 31, 64, and 128 (Attachment 2)

RESPONSE: HS&G commissioned an Environmental Noise Study for the proposed LHD pit (BSA 2008). Four residential noise locations were analyzed (Figure 2). The study determined that the existing noise level at the residences around the proposed site was 47 L_{dn} (dBA), which is typical for very light density to light suburban areas. The L_{dn} is a day-night weighted average used to describe the total general noise at a location over a twenty-four hour period. The existing L_{90} noise level, which is the noise level exceeded 90% of the time, was 36 dBA. The L_{90} is typically called the “ambient” noise level. The dominant noise source was traffic on Valley Drive and Canyon Ferry Road (BSA 2008).

The crusher and asphalt/concrete plant would become the dominant ambient noise sources. The predicted noise of the operations would typically be considered a moderate noise level, except for crushing operations conducted until the crusher pad is established at 20 feet below grade (1-2 years).

- d. COMMENT: The draft EA fails to disclose any type of monitoring requirements placed on operations to determine what noise levels will actually be heard, nor does it define what will be acceptable.

RESPONDENTS: 26, 31 and 144 (Attachment 2)

RESPONSE: The State of Montana does not have any legislatively-mandated noise standards or monitoring requirements. However, HS&G used the EPA guideline of 55 L_{dn} (dBA) to design its sound mitigations (EPA 1979). HS&G has agreed to a permit condition whereby it would need to submit data to DEQ to show the effectiveness of its sound mitigations before hours of operations for the crusher could be extended beyond 7 a.m. to 7 p.m. DEQ would use the data submitted by HS&G, site inspections and other information collected during the preceding years to determine whether or not to authorize extended hours of operation (Section 22.C.) See also response to comment b.

- e. COMMENT: Lights would be a constant source of annoyance. Lights at the current operation do not shine down, so these would probably shine right in my back door. Even with lights pointed down, a glow would be produced in the area.

RESPONDENTS: 6, 10, 104, 125, and 148 (Attachment 2)

RESPONSE: Impacts from nighttime lights would be minimized by using downward facing fixtures and only using the lighting necessary for safe operations in active work areas. Placing the crusher and plants below grade would reduce the impact of lights used around the facilities. HS&G will plant shrubs and trees along its property boundary as necessary to reduce visual impacts and these would reduce the impact from lights at the mine and plant area. The hours of operation have been changed to limit the hours of operation after dark. See the response to comment 10a.

- f. COMMENT: Noise and vibrations from trucks could affect the stability of the Eastgate Village lagoon, water and sewer lines and solar operation.

RESPONDENT: 6, 10, 104, 125, 148 (Attachment 2)

RESPONSE: Existing traffic on Lake Helena Drive produces noise and vibrations. Additional traffic from LHD pit operations would add to the amount of noise and vibrations, but would be of similar magnitude. As a result, no impact on the stability of Eastgate Village's structures would be anticipated.

11. Property Values (EA Section III.21)

- a. COMMENTS: The operation would decrease property values in the surrounding residential area.

RESPONDENTS: 4, 6, 9, 10, 12, 14, 20, 21, 25, 26, 27, 31, 42, 46, 47, 48, 58, 59, 62, 76, 78, 79, 83, 85, 88, 96, 97, 101, 102, 103, 116, 117, 126, 133, 137, and 145 (Attachment 2)

RESPONSE: Sale or market value of adjacent property may be negatively affected by the presence of a gravel pit, but DEQ has no specific information on this issue. In any case, under the Opencut Mining Act DEQ has no authority or jurisdiction over property value issues.

The Legislature has specifically limited DEQ's authority to issues relating to taxable value. Under Montana law, an administrative agency, such as DEQ, has only those powers granted to it by the Legislature through enactment of statutes. The Legislature has given DEQ two means of mitigating the effects of gravel operations on adjacent property. First, DEQ has authority to protect air quality; to minimize noise and visual impacts to the degree practicable through use of berms, vegetation screens, and limits on hours of operation; and to otherwise prevent significant physical harm to adjacent land. Second, in order to protect and perpetuate the taxable value of property, land on which operations are completed must be graded and revegetated.

The State contracted for a study to determine whether the existence of a gravel pit and gravel operation impacts the value of surrounding real property. The study is entitled: "Gravel Pits: The Effect on Neighborhood Property Values," by Phillip J. Rygg, MAI, Appraisal Research Group, Kalispell, Montana, February 1998. Rygg's study involved residential property near two gravel operations in the Flathead Valley. He concluded that these measures were effective in preventing decrease in taxable value of those lands surrounding the gravel pits. In his review of the study, Jim Fairbanks, Region 3 Manager of the Montana Department of Revenue, Property Assessment Division reported:

"In the course of responding to valuation challenges of ad valorem tax appraisals, your reviewer has encountered similar arguments from Missoula County taxpayers regarding the presumed negative influence of gravel pits, BPA power lines, neighborhood character change, and traffic and other nuisances. In virtually ALL cases, negative value impacts were not measurable. Potential purchasers accept newly created minor nuisances that long-time residents consider value diminishing."

Many residences have been constructed in the vicinity of the proposed site. A crushing and asphalt batching facility has the possibility of reducing the attractiveness of home sites to potential homebuyers seeking a quiet, rural/residential type of living environment. This operation could also affect the marketability of existing homes, and therefore cause a reduction in the number of interested buyers and may reduce the number of offers on properties for sale. This reduction in property turnover should not have any long-term effect on taxable value of property. If homeowners believe their property values are decreased because of a gravel operation, they may appeal to the County and the State for tax adjustment.

There would be a bond in place that would allow DEQ to reclaim the land under permit if the operator is unable to do so, which would protect taxable value. DEQ is required by law to see that the work is done, as specified in the Plan of Operations (HS&G 2008b).

- b. COMMENT: DEQ states that it has no authority or jurisdiction over property value, it does not state who has this authority.

RESPONDENT: 144 (Attachment 2)

RESPONSE: No state or local agency has authority to regulate property value per se. If homeowners believe their property values are decreased because of a gravel operation, they may appeal to the County and the State for tax adjustment. Impact-mitigating restrictions on operations of this nature, such as hours of operation, dust control, water testing, berms, and vegetative screens, and reclamation requirements have been successful elsewhere in the state. Formal tax appeals have typically not generated a reduction in taxable values of land affected by aggregate mining.

12. Recreation (EA Section III.17)

- a. COMMENT: The reclamation of the pit would be a good recreational opportunity for a park or bike course.

RESPONDENT: 75 (Attachment 2)

RESPONSE: HS&G has not proposed recreational development plans for the site and DEQ has no authority to require it.

13. Soils (EA Section III.1)

- a. COMMENTS: How can two samples be seen as adequate for assessing impacts from lead to the health and safety to nearby residents? Soil sampling done in Oct. 2007 found lead levels in some cases ten times higher levels on-site than indicated in the draft EA and the presence of elevated soil levels of arsenic and cadmium. This data was not included or analyzed in the draft EA.

We [East Helena LEAP] believe that a better characterization of the site is needed and we recommend up to 55 additional areas to be sampled. The EPA has proposed an action level for commercial areas of 1,300 ppm lead. This is of paramount importance since residential areas primarily surround the proposed site.

RESPONDENTS: 8, 9, 26, 44, 47, 56, 65, 66, 123, 128, 144 and 148 (Attachment 2)

RESPONSE: According to EPA rules for the East Helena Superfund Site (EHSS), property owners with lands of concern within the administrative boundary of the EHSS are required to work with the EPA, DEQ Superfund Program, and LEAP to determine whether remedial action must occur on a property prior to disturbance. The purpose of this requirement is to allow economic development of lands within the EHSS while ensuring site activities are conducted in a manner protective of human health and the environment. HS&G has complied with all requirements imposed by these agencies to date, and has committed in its Operations Plan to develop and operate the site in accordance with a Dust Mitigation Plan (HS&G 2008a) (Attachment 3) approved by the DEQ Superfund and LEAP. Implementation of the Dust Mitigation Plan would be a requirement of HS&G's opencut mining permit. Events and activities pertaining to metals-impacted topsoil at the site include the following:

- Representative of EPA, DEQ Superfund, LEAP, HS&G, and the DEQ Opencut Program and MEPA staff met on October 16, 2007 to determine requirements for HS&G to proceed with the proposed development of the site.
- As authorized by EPA at this meeting, representatives of the DEQ Superfund Program, LEAP, and HS&G's environmental consultant for this project, TetraTech, subsequently met on-site to identify soil sampling locations and analytical parameters.

- The approved sampling effort was completed during October 2007 (TetraTech 2007) and results were attached to DEQ's draft EA.
- Upon review of the October 2007 sample results, LEAP sent a December 12, 2007 letter to the Opencut Program requesting that additional soil sampling be performed to better define the extent and magnitude of areas with elevated lead concentrations prior to site disturbance.
- As a result, HS&G developed a work plan to conduct additional soil sampling and analysis in compliance with LEAP's request.
- HS&G contracted TetraTech to develop and implement a work plan for the additional soil sampling (TetraTech 2008). The work plan was approved by LEAP and DEQ Superfund and soil sampling has been completed. Results of this sampling program will be used by HS&G to guide stripping and stockpiling of topsoil at the site in accordance with the Dust Mitigation Plan (HS&G 2008a).

- b. COMMENTS: The surface soils are contaminated with lead. Permitting based on the EA as it currently reads would basically be placing soils on only a 5 ft filtration layer as opposed to the existing 45 ft. The lead contaminated soils should not be allowed to remain on-site. It should be hauled away to an approved disposal site. Perhaps it could be buried on part of their land that does not have contaminated topsoil. The contaminated soil should be replaced to prevent recontamination of the reclaimed soils in surrounding area.

RESPONDENTS: 8, 9, 12, 17, 26, 28, 44, 47, 51, 56, 65, 66, 67, 71, 84, 91, 95, 106, 117, 119, 123, 128, 144 and 148 (Attachment 2)

RESPONSE: According to EPA EHSS rules, property owners with lands of concern within the administrative boundary of the EHSS are required to work with the DEQ, Lewis & Clark County and the EPA to determine whether remedial action must occur on a property prior to disturbance. Based on the results of the October 2007 soil analysis (TetraTech 2007), HS&G developed a work plan to conduct additional soil sampling and analysis to define the extent and magnitude of areas with elevated lead concentrations prior to site disturbance (TetraTech 2008). Analytical results from this second soil sampling event would be used to guide the salvage and stockpiling of metals impacted topsoil in accordance with the approved Dust Mitigation Plan (HS&G 2008a). HS&G developed its Dust Mitigation Plan to mitigate metals-impacted topsoil dust during stripping activities, berm stockpiling and road construction. This work plan has been approved by LEAP and the DEQ Superfund Program in conformance with EPA's requirements for the EHSS (LEAP 2008, DEQ 2008). Implementation of the plan would be a requirement of HS&G's opencut mining permit. The Dust Mitigation Plan (Attachment 3) provides that topsoil would be watered prior to disturbance and that stripping activities would be performed when wind speed is less than 15 miles per hour (mph). Stripped topsoil with levels of metals above the action/screening level of 500 ppm lead and other metals would be stockpiled separately from topsoil with metal concentrations below these levels. Topsoil stockpiles would be hydroseeded with 2,500 to 3,000 lbs/acre of mulch to prevent wind-erosion and aid in vegetation establishment. Topsoil stockpiles would be irrigated and kept moist until vegetation was established.

Regarding the fate of the berm of metals-impacted topsoil at the time of reclamation, HS&G's Plan of Operations (HS&G 2008b) indicates that: "Several disposal options are currently being evaluated, depending upon the volume and overall heavy metals concentrations of the topsoil."

Under permit conditions, HS&G would be required to obtain approval from EPA and the

DEQ Superfund Program regarding the ultimate fate of this material before the site is reclaimed. Refer to Section 22.C.

In either case, HS&G would be responsible for replacing the volume of contaminated soil that cannot be used for reclamation with an equivalent volume of clean topsoil, as needed to complete reclamation in accordance with the Plan of Operations. DEQ would require the necessary bond to obtain the replacement soil for reclamation.

- c. COMMENTS: Why would this site even be considered when it is a US EPA Superfund Site? EPA has yet to establish a Record of Decision of the cleanup of contaminated soils in the areas that include this property. I believe that HS&G, EPA, and DEQ would incur significant liability if land disturbance of this level is allowed or permitted in an area that designated a CERCLA Superfund Site with no current limits of exposure established in accordance with federal law.

RESPONDENTS: 9 and 117 (Attachment 2)

RESPONSE: HS&G met with EPA, LEAP, and the DEQ Superfund Program to develop a plan for handling the contaminated soils on the site. EPA established this process to allow economic development of land within the EHSS while ensuring human health and the environment are protected. Without such a process, there could be no development of land in the EHSS and future economic growth in and around the City of East Helena would be severely limited.

The collaborative efforts of HS&G, EPA, LEAP, and the DEQ Superfund Program resulted in development of the Dust Mitigation Plan (HS&G 2008a) and a sampling work plan (TetraTech 2008). These documents have been reviewed and approved by LEAP (2008) and the DEQ Superfund Program (2008). A screening/action level of 500 ppm lead is specified in the Dust Mitigation Plan. Contaminated soils would be handled and stockpiled separately. See Comment 12b above and Section III.1 for more detail. The 500 ppm lead action level is the most protective (residential) cleanup level outlined in the Proposed Plan for the East Helena Superfund Site (EPA 2007).

- d. COMMENT: The incremental increase stated in the Cumulative Impacts section from lead-impacted dust to the valley would much greater to the adjacent landowners. No agricultural land disturbance as described in the EA is occurring on lands within the Superfund Site.

RESPONDENT: 9

RESPONSE: The cumulative impact from dust is primarily addressed in the air quality section, but it will be briefly addressed here as well. The mitigations proposed for handling the metals-impacted topsoil would mitigate potential risks from topsoil dust. The soil would be handled damp and would be stockpiled and kept damp until the surface is revegetated. It would not be used for reclamation. While there may be no agricultural lands being disturbed within the Superfund area, there are other lands being disturbed for construction of homes, roads, and commercial buildings. Dust in the area is generated by those activities as well the gravel put on the roads, gardens, the path along the canal, roads and paths across open fields, etc.

- e. COMMENT: Unreclaimed gravel pits are used illegally as landfills and contaminated by liquids like oil, gas, fertilizers, sewage, etc. and solid materials like cars, appliances, etc. I

thought reclamation was returning land to its original state, or better yet improving the site. Is there an erosion control plan for flood events known to occur in the area?

RESPONDENTS: 12, 71, 84 and 101 (Attachment 2)

RESPONSE: The Opencut Mining Act requires that gravel pits be reclaimed and a reclamation bond would be required before operations could begin at this site if the permit is approved. The reclaimed bowl would not be suited for a landfill unless DEQ's Solid Waste Program determined that it met all state requirements for such a facility. There is nothing in the Opencut Mining Act that requires a gravel pit to be reclaimed to its original or an improved state. The act requires that the land be brought back to a productive use. The proposed post mining land use is pasture, which is a productive land use similar to its current use.

Regarding erosion control, HS&G's Plan of Operations indicates that topsoil stockpiles, berms and barriers will be hydroseeded with an appropriate seed mix to prevent loss by surface water runoff and wind erosion. The main mine permit area will drain internally, so all stormwater will be retained on-site. The Mine Safety & Health Administration (MSHA) requires berms to be placed around the exterior perimeter of all areas being excavated to prevent accidental entry into a high-wall area. These safety berms will also serve as stormwater controls to prevent stormwater from entering or leaving the main permit area.

14. Traffic Safety and Highway Impacts (EA Section III.11)

- a. COMMENT: HS&G should be required to have a comprehensive Traffic Impact Study performed in regards to the proposed Lake Helena Valley Drive pit location. The impact study should investigate things like: trucks turning from Lake Helena Drive onto Canyon Ferry Road, the realistic number of trucks and other vehicles arriving and leaving the site daily (77 truck trips per day is too low), the ability of the road infrastructure to handle the extra weight and turning requirements of the large trucks, alternate routes needed during Canyon Ferry Road reconstruction, and whether or not a light is needed at Lake Helena Drive and Canyon Ferry Road. Lake Helena Drive and Valley Drive are not suitable for truck traffic and need to be upgraded.

RESPONDENTS: 2, 4, 8, 9, 10, 11, 13, 16, 23, 24, 26, 29, 33, 41, 44, 47, 51, 55, 57, 64, 75, 79, 85, 87, 97, 99, 101, 105, 106, 108, 121, 122, 123, 125, 144 and 148 (Attachment 2)

RESPONSE: DEQ does not have the authority to require a traffic study and has not prepared one. However, in response to public comments on the draft EA, HS&G contracted with WWC Engineering to prepare a Traffic Impact Study (WWC 2008a,b) and with Pioneer Technical Services, Inc. to evaluate the Lake Helena Drive typical section for an increased truck traffic count (Pioneer 2008). DEQ does not have the expertise, knowledge, or any legal authority to regulate roadway design or traffic safety standards. As a result, DEQ submitted these documents to MDT, which evaluated pertinent technical issues and provided its findings to DEQ (MDT 2008).

According to the Traffic Impact Study (WWC 2008a,b), traffic generated by HS&G's proposed LHD pit, an additional 151 haul truck roundtrips per day of operation, can be adequately accommodated by the proposed access point and upgrades to the existing road system. Lake Helena Drive south of the proposed permit area access point

(residential areas and schools) would not experience significant increased truck traffic above what is currently observed on this section of Lake Helena Drive.

Regarding the intersections of Canyon Ferry Road and Lake Helena Drive, and Lake Helena Drive and Old Highway 12:

- The intersections currently operate at a stable flow with slight delays (Level of Service B), including traffic that would be anticipated as a result of the LHD pit (WWC 2008a,b).
- The WWC study (2008a) concluded that a traffic signal is warranted at the intersection with or without the proposed pit due to growth in the valley. However, MDT might not approve such a signal because of the impacts to the efficiency to the road and the lack of adequate line of sight.
- Turn lane analysis also showed that a right-turn lane from Canyon Ferry Road to turn south onto Helena Valley Drive and a dedicated left turn lane on Helena Valley Drive to turn west on Canyon Ferry Road may be warranted by 2018, but not all the additional traffic contributing to those needs could be solely attributed to traffic associated with HS&G's operation (WWC 2008a).
- According to WWC (2008a), the shoulder radius at the intersection of Lake Helena Drive/Old Highway 12 should be increased from 25 feet to 50 feet wide to allow trucks to negotiate the turn without obstructing traffic. MDT stated that the shoulders at this intersection should be improved to accommodate a WB-67 design vehicle (tractor trailer) (MDT 2008). (These recommendations are intended to lessen potential impacts on traffic safety that may result from a tractor trailer turning through an intersection with inadequate turning radius. Under such conditions, the tractor trailer needs to move into the opposite (on-coming) lane in order to complete the turn.)
- MDT is planning improvements to Canyon Ferry Road and that design would accommodate large truck turning movements at the Lake Helena Drive/Canyon Ferry intersection (MDT 2008, WWC 2008a). If HS&G begins operations before MDT's intersection improvements are completed, MDT suggests that HS&G submit to MDT for approval design plans to improve the intersection for safe turns of a WB-67 design vehicle. If HS&G chooses to perform this work, it would also be responsible for coordinating their project with the remaining utilities (MDT 2008).
- HS&G may use Old Highway 12 or other official detours as alternate routes while Canyon Ferry Road is under reconstruction beginning in 2009; however, until the contract is awarded it is unknown how long the Canyon Ferry Road project would take to complete and thus how long alternate routes may be needed (Skinner pers. comm. 2008).

The In-Place Typical Section (pavement) study for Lake Helena Drive (Pioneer 2007, 2008) indicates the current pavement thickness for Lake Helena Drive is acceptable for increased traffic loads that would be associated with the proposed LHD pit plus area growth over a design period of 20 years. However, an analysis performed by MDT indicated that an overlay to the pavement would likely be necessary during the life of the operation (MDT 2008).

- b. **COMMENTS:** The increased usage of Canyon Ferry would increase travel time and deteriorate more of that road quicker. Lake Helena drive is a county road that is substandard for the current traffic levels due to narrowness of road surface, lack of shoulders, and slope steepness of the roadbed. This level of increased traffic of large loaded trucks more than "slightly increases the danger to pedestrian and bicyclists .." as stated in the draft EA. Safety issues for all users including other vehicles would increase substantially if this level of truck

traffic was added to Lake Helena Drive. You are going to add more trucks to an already busy and deadly street.

The draft EA indicated there would be additional traffic on Valley Dr. Reviewing the map, there is no access from the property to Valley Dr. The access is on Lake Helena; this must be corrected.

Gravel spilled on the road is dangerous due to rocks breaking windshields and it is hazardous to bicyclists. Who will be monitoring HS&G to assure they are cleaning up spilled gravel?

RESPONDENTS: 3, 4, 6, 9, 11, 16, 25, 26, 29, 36, 41, 53, 64, 96, 99, 103, 104, 106, 107, 109, 126, 134, 135, 144, and 148 (Attachment 2)

RESPONSE: Impacts on county roads such as Lake Helena Drive where gravel trucks enter from privately-owned gravel pits are the responsibility of the operator and Lewis & Clark County. The Lewis & Clark County Public Works Department is the permitting agency for the approach onto Lake Helena Drive and has issued an approach permit. No access onto Valley Drive has been proposed and the EA text has been corrected. The additional vehicles associated with the pit would not reclassify Lake Helena Drive from its category as a minor collector roadway (WWC 2008a,b). Placement of stop signs at the exit point from the pit would reduce the danger of vehicle accidents. The Traffic Impact Study (WWC 2008a) has been submitted to MDT during their planning process for the pending Canyon Ferry Road improvement project. Therefore, information about the proposed LHD operation is available to support infrastructure design decisions, as well as traffic controls and safety procedures that would need to be implemented by MDT during the construction process and beyond.

HS&G expects to develop material processing and production capacity at the LHD site over the course of three to four years. It would be the responsibility of HS&G, Lewis and Clark County, and MDT to coordinate activities and take those measures necessary to ensure traffic safety to the full extent allowed by applicable laws.

The use of compression brakes on public roads is outside the jurisdiction of DEQ, but HS&G has agreed to a permit condition that prohibits use of compression brakes on Lake Helena Drive, the intersection of Canyon Ferry Road and Lake Helena Drive, Old Highway 12, and the intersection of Highway 12 and Old Highway 12 except in emergency situations. According to the Lewis & Clark County Public Works Department, HS&G must clean spilled gravel products from the highway in the immediate vicinity of the pit approach (Nisbet pers. comm. 2008). People may contact HS&G about rocks falling from a gravel truck and breaking a windshield. It may be difficult to determine if gravel flung up from the road is the product of the gravel pit or gravel placed down by the county during the winter on snowy and icy roads. Regarding safety, see the response to the next comment.

- c. COMMENTS: To say that "Occasional truck traffic would slightly increase the danger to people walking/riding on Valley Drive and Lake Helena Drive" is inaccurate. There would be a significant threat to pedestrians and bicyclists due to the extremely narrow and steep shoulders on this road way. We are concerned about children walking next to the roadway to and from school. Sidewalks are narrow where present and there is no buffer zone between the walk and Lake Helena Drive through the Eastgate subdivision. Children use the walks

and I have seen them veer off onto the road while riding bikes. Take a better look at the number of vehicle/pedestrian accidents on Lake Helena Drive.

RESPONDENTS: 2, 4, 9, 10, 18, 28, 31, 88, 97, 101, 103, 131 and 144 (Attachment 2)

RESPONSE: The traffic study found that none of the accidents reported for Lake Helena Drive between 1997 and 2006 involved pedestrians (WWC 2008a). All seven accidents south of Canyon Ferry Road involved only vehicles; only one involved two vehicles, one involved an impact with a wild animal, and another involved an off road overturn. Given this information it does not seem likely that the additional traffic generated by HS&G would create a significant increase in accidents on Helena Valley Drive nor cause an increase in vehicle/pedestrian accidents.

Eight accidents occurred on Canyon Ferry Road between 1997 and 2006 at the intersection with Lake Helena Drive. All eight accidents were caused when a northbound or southbound vehicle failed to yield to an eastbound or westbound vehicle and was struck at a right angle (WWC 2008a). The current flashing light at the intersection is meant to warn all traffic about the intersection. People in cars on Lake Helena Drive would be at a disadvantage compared to a gravel truck driver who would be sitting up higher and have a better view of oncoming traffic on Canyon Ferry Road.

- d. COMMENTS: This road does not meet county road standards as it is. The impact to road surfaces by loaded truck traffic is substantial. According to the MDT "Damage from Heavy Vehicles on Rural Roads of Montana" by Michael Ivanoff and Paul Jagoda, P.E. one trip by a loaded 18 wheel tractor-trailer is equivalent in road surface damage to 2,380 passenger car trips. A loaded dump truck has the equivalent road surface impact of 1,280 passenger car trips. So, the daily impact to the road surface of Lake Helena Drive and adjacent roadways of 128 loaded trucks and truck-trailer combinations is considerable and would lead to substantial decreases in the life span of those roadways. This impact would be on the county taxpayer who would be responsible for the rebuilding of these roads when they fail. The bridges were not built for heavy trucks. Who is going to pay to upgrade and repair the roads?

RESPONDENTS: 8, 9, 10, 11, 26, 31, 44, 48, 54, 57, 64, 75, 114, 119, 136 and 148 (Attachment 2)

RESPONSE: Lake Helena Drive currently does not meet Lewis & Clark County standards of 28 feet for paved roads as it is only 24 feet wide. It would not be HS&G's responsibility to upgrade the road to meet county requirements. The bridges would support the weight of the gravel trucks. The In-Place Typical Section (pavement) study for Lake Helena Drive (Pioneer 2007, 2008) indicated the current pavement thickness for Lake Helena Drive is acceptable for increased traffic loads that would be associated with the proposed LHD pit plus area growth over a design period of 20 years. However, an analysis performed by MDT indicated that an overlay to the pavement would likely be necessary during the life of the operation (MDT 2008). Taxes paid through fuel purchases help pay for road maintenance. HS&G would be purchasing a large amount of fuel for its vehicles and contributing to those taxes. Property taxes also are used for county roads and HS&G would also be paying property taxes on the land and equipment.

- e. COMMENTS: Truck traffic would increase and there would be an increased danger to parents and students traveling to the R.H. Radley and Eastgate schools located south of the proposed pit off of Lake Helena Drive.

RESPONDENTS: 6, 35, 77, 97, 115 and 145 (Attachment 2)

RESPONSE: The primary truck route would be north from the site access on Lake Helena Drive to Canyon Ferry Road. This is the preferred route to access Helena and points off of U.S. Highway 12 because it would avoid the highly urbanized and high pedestrian-use areas in East Helena. Additionally, traveling south on Lake Helena Drive to East Helena would require multiple stops and turning movements that are not efficient for truck traffic. As a result, only deliveries of material specifically for East Helena sites would go south on Lake Helena Drive and involve travel on roads in residential areas of East Helena and near the R.H. Radley and Eastgate Schools. HS&G has agreed to a permit condition that prohibits it from driving haul trucks past the Eastgate and Radley schools from 7:45 am to 9:00 am and from 3:00 pm to 4:00 pm on school days.

14. Vegetation (EA Section III.4)

COMMENTS: What would HS&G do to control weeds and grass fires if they do not graze the property?

RESPONDENTS: 84 and 103 (Attachment 2)

RESPONSE: HS&G has developed a Weed Compliance Plan that has been approved by the Lewis & Clark County Weed Coordinator (Lewis & Clark Co. 2007b). The chance for a grass fire on the proposed permit area during the life of the operation is negligible because the majority of the proposed permit area would be used for materials storage, equipment and operations and would not be occupied by a pasture grass community. After reclamation the permit area would be seeded with a pasture mix that would be appropriate for grazing.

15. Water Quality (EA Section III.2)

- a. COMMENTS: How would HS&G manage their operation to be protective of groundwater quality?

RESPONDENTS: 1, 5, 7, 39, 39, 47, 51, 64, 69, 72, 74, 96, 125, 128, 137, 143, 144 and 148 (Attachment 2)

RESPONSE: HS&G has developed a Groundwater Sampling and Analysis & Contaminant Detection Response Plan (TetraTech 2008) (Attachment 4) to characterize the hydrologic setting, document baseline groundwater physical and chemical conditions and establish a groundwater monitoring program and contaminant response procedures. Compliance with this document would become a condition of the operating permit.

Fuel and asphalt liquids would be stored in aboveground single-wall steel storage tanks. These tanks would be placed in concrete secondary containment enclosures. Temporary storage tanks used during the portable crushing/screening operations would be placed in secondary containment pits lined with sheet plastic. HS&G has prepared a Spill, Prevention, Control and Countermeasures Plan (SPCC) that addresses handling solvents, wash-water, and wastes associated with the asphalt plant, concrete plant and truck use (HS&G 2007c). Compliance with this plan would be made a condition of the

permit. Wash water from concrete-mixing trucks would be discharged to a concrete-lined pond where concrete particles and sediment would settle out and the remaining water would evaporate, thereby preventing migration of alkaline water to the groundwater beneath the site. The remaining solids would be removed from the concrete-lined pond and reused in recycled products.

HS&G has completed a work plan for additional surface soil sampling and laboratory analysis to further define the extent of metals-impacted soils within the proposed permit area. HS&G would stockpile surface soils with elevated concentrations of lead (greater than 500 ppm) separately. Under permit conditions, HS&G would be required to obtain approval from EPA and the DEQ Superfund Program regarding the ultimate fate of this material before the site is reclaimed (Section 22.C).

- b.** COMMENTS: The pumping of wells within the proposed LHD site could draw the existing ASARCO lead-contaminated groundwater plume towards residential wells around the proposed LHD site.

RESPONDENTS: 2, 4, 9, 10, 15, 24, 26, 31, 35, 38, 39, 42, 56, 59, 75, 76, 77, 79, 88, 97, 101, 103, 109, 115, 128, 144, 145 and 148 (Attachment 2)

RESPONSE: The East Helena Smelter groundwater plume is approximately 1.25 miles southwest of the proposed gravel site and groundwater flow from the smelter is to the northwest away from the proposed gravel site (EPA 2006). Well logs in the immediate vicinity of the proposed gravel pit generally show sand and gravel deposits in the upper portion of the aquifer (GWIC 2008). Aquifers in sand and gravel deposits typically have high hydraulic conductivities in the range of 0.001-100 cm/sec (Freeze & Cherry 1979). Pumping wells in aquifers with higher hydraulic conductivities typically show smaller areas of influence from its pumping effects. There are over 150 wells within a ½ mile radius of the proposed gravel pit with an average yield of 26 gpm (GWIC 2008). Based on the orientation of the East Helena Smelter groundwater plume it does not appear that groundwater withdrawal from wells in the East Helena area is affecting the groundwater plume from the East Helena Smelter site.

- c.** COMMENTS: No analysis of the potential for groundwater quality impacts is provided in the draft EA. No baseline data has been collected. No monitoring plans for water quality are mentioned in the document. Regardless of mitigation measures, some type of monitoring system must be in place to make sure operations are not impacting water quality. Monitoring program needs to establish a baseline of non-impacted groundwater prior to permitted activities threatening contamination.

RESPONDENTS: 9 and 47 (Attachment 2)

RESPONSE: HS&G has developed a Groundwater Sampling and Analysis & Contaminant Detection Response Plan (TetraTech 2008) to characterize the hydrologic setting, document baseline groundwater physical and chemical conditions and establish a groundwater monitoring program and contaminant response procedures. This document would become a condition of the operating permit

- d.** COMMENTS: At the public meeting HS&G stated they would be bringing in a cold millings into the site to be used for recycled pavements. No where in the draft EA was the storage of this material discussed.

RESPONDENTS: 26 (Attachment 2)

RESPONSE: Cold millings are the materials collected from grinding up pavement in advance of road resurfacing. They are not considered hazardous materials. Millings can be reused in paving material of a similar content, such as asphalt. Asphalt millings and other asphalt debris for recycling can be stored on the ground as long as they do not come in contact with surface water or groundwater. HS&G plans to store these materials pending reuse and would not bury these materials on-site. Such temporary stockpiles of asphalt materials are allowed at open-cut mine sites and do not represent any more risk to groundwater quality than do asphalt roadways throughout the state.

- e. COMMENTS: It is unclear how stormwater would be managed. On-site storage and use of fuels, solvents, asphaltic liquids and other industrial chemicals for the proposed facility create the potential for these pollutants to enter the ponds and the aquifer. Stormwater that is collected should be sampled before re-use.

RESPONDENTS: 39 and 65 (Attachment 2)

RESPONSE: Stormwater would be retained on-site. Stormwater from the concrete batch plant and asphalt batch plant areas would be internally drained, and the runoff would flow into the settling ponds or infiltrate into the ground. Fuel and asphalt liquids would be stored in aboveground single-wall steel storage tanks. These tanks would be placed in secondary concrete containment enclosures. Temporary storage tanks used during the portable crushing/screening operations would be placed in secondary containment pits lined with sheet plastic. HS&G has submitted a Spill, Prevention, Control and Countermeasures Plan (SPCC) that addresses handling solvents, wash-water, and wastes associated with the asphalt plant, concrete plant and truck use (HS&G 2007c). Compliance with this plan would be made a condition of the permit. . Because of these protective measures there would be no requirement to sample stormwater before re-use.

- f. COMMENTS: Does the DEQ have any way of enforcing the protection of groundwater quality?

RESPONDENTS: 47 (Attachment 2)

RESPONSE: Under 75-5-605 of the Montana water quality statutes, a person may not cause pollution of surface water or groundwater. DEQ has authority under those statutes to impose penalties and require cleanup.

16. Water Quantity (EA Section III.2)

- a. COMMENTS: Where would HS&G get the water for their operations and could it affect my water supply?

RESPONDENTS: 1, 2, 3, 4, 8, 9, 10, 11, 17, 20, 21, 25, 31, 35, 38, 39, 42, 44, 47, 48, 49, 51, 58, 61, 64, 71, 75, 76, 79, 84, 96, 97, 99, 101, 103, 111, 112, 114, 119, 125, 126, 133, 137, 143 and 148 (Attachment 2).

RESPONSE: Water for operations would be generated or used from the following on-site sources: stormwater runoff, recycled gravel wash water and well water. In addition, water for crusher/wash plant operations would be obtained off-site from the Helena

Valley Irrigation District canal, pending final approval of the Bureau of Reclamation (BOR).

On-site Sources: Besides stormwater runoff and recycled gravel wash water, water would be obtained from four or five deep on-site wells (>250 feet deep). HS&G projects that it will use approximately 5.34 million gallons of groundwater per year (HS&G 2008c). One of the wells is currently used to water livestock. Depending on the condition of the existing wells, two or three replacement wells may need to be installed to supply the concrete plant, dust control, dispatch office and asphalt plant. Any increase in withdrawal from existing wells or planned installation of new wells would need to meet DNRC permitting requirements and/or exemptions for small water supply wells. Exemption wells cannot pump more than 35 gallons per minute (gpm) or 10 acre-feet per year and cannot be manifolded into the same system. HS&G anticipates that use of water from on-site wells may not be necessary during the first year of aggregate production. Water for operations at the site during that timeframe would instead be hauled to the site from an off-site source.

DNRC rules do not require exempt wells to be tested to determine if the well could cause adverse impacts to water supplies in the vicinity of the well. However, well logs in the immediate vicinity of the proposed gravel pit generally show sand and gravel deposits in the upper portion of the aquifer (GWIC 2008). Aquifers in sand and gravel deposits typically have high hydraulic conductivities in the range of 0.001-100 cm/sec (Freeze & Cherry 1979) that tend to buffer impacts from water withdrawals. Any water development of the proposed site, whether residential or for gravel mining, would result in an increase of water withdrawal from the aquifer.

HS&G has agreed to the following permit conditions in order to conserve groundwater:

- Use groundwater only for concrete aggregate stockpile watering from October 15 to April 15, for dust control from October 15 to April 15, for operation of the batch plant and asphalt plant, for landscaping, and for dispatch office.
- Install a flow meter on each groundwater well and record and report to DEQ the amounts of groundwater used annually.
- Comply with its approved groundwater monitoring program (Tetra Tech 2008b,c), except that it must conduct groundwater level measurements on a monthly basis until August 2013. HS&G will provide the water level monitoring data to the DEQ within 10 days of the end of each month.
- Not use water from Prickly Pear Creek for any purpose.

HS&G projects that, with these restrictions, annual groundwater requirements will be 5.34 million gallons (HS&G 2008c).

Off-site water source: As the result of public comments on the draft EA, HS&G sought an off-site water source for crusher/wash plant operations from the Helena Valley Irrigation District. The district has unanimously voted to sell HS&G water from the canal located north of the property (Figure 2), pending final approval of the Bureau of Reclamation (BOR). HS&G's application to the Irrigation District and the BOR includes a change of water use to commercial/industrial activities. HS&G has requested up to 7 cubic feet/second (cfs) per day for one to two weeks in the spring to fill their pond(s). Once the ponds are filled, HS&G's demand from the canal would change to a maximum of 2 cfs per day for the remainder of the crusher/wash plant season (no winter use). This water source would typically be available from March 20 to December 9 (DNRC Water Right # 41I 40820-00). Crusher/wash plant operations are not typically conducted during

freezing weather conditions. Water used in crusher/wash plant operations would flow to settling ponds and would be recycled for operational uses once sediment had settled out sufficiently. Use of water from the irrigation district would reduce the amount of water that would otherwise need to be obtained from on-site sources. Due to the variable availability of water from Prickly Pear Creek, HS&G does not plan to utilize its existing water right to obtain water from the creek via the Stockburger Ditch and has agreed to a permit condition that would prohibit use of water from Prickly Pear Creek.

- b. COMMENTS: There is not enough baseline groundwater information about the proposed site to know if groundwater levels will be affected.

RESPONDENTS: 4, 5, 8, 9, 11, 26, 39, 51, 55, 56, 60, 74, 75, 105, 109, 117, 123, 128 and 136 (Attachment 2).

RESPONSE: In accordance with the Work Plan for Monitoring Well Installation and Routine Monitoring (TetraTech 2008b) (Attachment 4), HS&G would install five monitoring wells at the site. Two would be located on the south side of the property (hydraulically upgradient) and three would be located on the north side of the property (downgradient). In accordance with the Groundwater Sampling and Analysis Plan & Contaminant Detection Response Plan (TetraTech 2008c) and permit conditions, depth to groundwater in these wells would be monitored monthly during the first five years of operation to establish detailed information on seasonal groundwater fluctuations at the site. The first year of monthly groundwater level monitoring would be conducted prior to excavating the pit deeper than 25 feet below grade. Subsequently, groundwater levels would be measured on a semiannual basis to document hydrographic trends over time. These data can be used to evaluate any changes in groundwater levels that develop across the site as operations are developed.

- c. COMMENTS: Will HS&G be responsible for changes to my water supply and/or well?

RESPONDENTS: 6, 14, 39, 44, 46, 77, 97, 117, 122 and 146 (Attachment 2).

RESPONSE: DNRC rules do not require exempt wells to be tested to determine if the well could cause adverse impacts to water supplies in the vicinity of the well. Because Basin 41I is a "closed basin", HS&G would need to apply for a new water right permit and a change of an existing water right to mitigate for any new well that would exceed the 35 gpm / 10 acre-feet per year limitation. This permitting process, if it becomes necessary, would require testing to determine the existence or extent of any adverse impact to existing water right owners.

Any water development at the proposed site, whether for a residential subdivision, commercial uses, or gravel mining, would result in an increase of water withdrawal from the aquifer. Other water developments in the area hydraulically upgradient and cross-gradient of the site would also affect water supplies in the area, as would changes in precipitation patterns. If a local water supply well experiences negative impacts (e.g. decrease in the water table, well failure, or water quality issues) DEQ has no legal authority to hold HS&G responsible for those impacts. If a landowner or Home Owners Association believes their water supply has been negatively affected by HS&G they would need to pursue recourse through the Water Use Act, which is administered by the Department of Natural Resources and Conservation. Groundwater use and level data on-file with DEQ would be available for this matter.

17. Wildlife (EA Section III.5)

COMMENT: The Proposed Action would impact migratory birds that inhabit the area.

RESPONDENT: 9 (Attachment 2).

RESPONSE: Migratory birds are unlikely to use the proposed permit area for breeding, resting or forage because there is not suitable habitat. The vegetative community consists of sparsely distributed pasture grass types with a minor component of noxious weeds.

COMMENT: The Natural Heritage Program shows bobolink and bald eagles present. This area is suitable habitat for bobolink.

RESPONDENT: 144 (Attachment 2).

RESPONSE: The Natural Heritage Program did not identify the presence or inferred extent of bobolink (a Montana bird Species of Concern) or bald eagle in Section 19, Township 10 North, Range 2 West (MNHP 2007). The nearest bobolink inferred extent is located approximately three miles to the north of the proposed permit area (Miller pers. comm. 2008). Bobolink prefer habitat with moderate to tall vegetation and moderate to dense vegetation (Natureserve 2007). Therefore, based on the absence of this vegetative cover there is not suitable habitat for bobolink within the proposed permit area. Bald eagle may occasionally be seen in the area but there is no suitable roosting or foraging habitat within the proposed permit area.

COMMENT: Mule deer, elk, upland game birds and moose have been observed on this HS&G property. The property is surrounded by a canal and roads increasing the potential for these animals to be struck.

RESPONDENT: 144, 148 (Attachment 2).

RESPONSE: These wildlife species are known to occupy the area. However, because of the sparse vegetative cover on the HS&G property it is not likely to be preferred habitat. The roads around the HS&G property are currently used by vehicles and already present the potential for vehicle-animal interactions. This threat would not increase significantly due to the proposed pit.

Section III: Impacts on the Physical Environment

RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
<p>1. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE: Are fragile, compactable or unstable soils present? Are there unusual geologic features? Are there special reclamation considerations?</p>	<p><u>Existing Environment:</u> The proposed permit area is located in an erosionally-smoothed and reworked alluvial surface in the Helena Valley. The overburden on the site is mapped as two similar units: the Attewan-Nipt and Nipt-Attewan complexes (SSURGO 2007). Typically, these soil complexes have loam to gravelly loam to 5" depth, clay loam to gravelly clay loam to 8" depth and extremely gravelly sand to very gravelly loam to 13". Field sampling indicates mine-area soil depths of 3" to 5" which is shallower than the typical profile. These soil types would accommodate salvage and redistribution for reclamation in the future. Material underlying these soils consists of alluvial sands, gravels and cobbles.</p> <p><i>Metals-impacted soils:</i> The proposed permit area is located within the administrative boundaries of the East Helena Superfund Site (EHSS) (Brown pers. comm. 2007). Lands within the site are impacted with lead and arsenic as the result of historic lead smelting operations at the former ASARCO smelting facility in East Helena (TetraTech 2007). The proposed permit area is located within an area of concern due to its proximity to the former smelter and former flood irrigation of the site using water from Prickly Pear Creek (Brown per comm. 2007). Soil at the site has been impacted by aerial deposition of materials release from the smelter, or by metals dissolved in the irrigation water obtained from Prickly Pear Creek. Aerially deposited particles may have been reworked and concentrated locally by the flood irrigation process. Sixteen soil samples were collected from the site in October 2007 and were analyzed for lead, arsenic and cadmium (TetraTech 2007). Elevated lead was present in the samples above the EPA action/screening level of 500 ppm with concentrations ranging from 398 ppm to 1,711 ppm. Elevated arsenic was present in the samples above the EPA soil screening level of 14.5 ppm with concentrations ranging from 43 ppm to 175 ppm. Cadmium was measured in one of the sixteen samples at a concentration of 30 ppm (TetraTech 2007). The remainder of the samples exhibited cadmium concentrations below the laboratory detection limit of 24-29 ppm. Although the EPA Region 9 soil screening level for cadmium is 4 ppm, the Human Health Risk Assessment for Residential Soil in East Helena (Kleinfelder 1995) used a soil screening level of 274 ppm (Reed pers. comm.)</p> <p><u>Impacts from Proposed Action:</u> Topsoil would be salvaged to an average depth of approximately 5 inches and stockpiled as mining progresses and would be placed in a 12-foot high berm located on the Valley Drive side of the permit area. In accordance with the Dust Mitigation Plan (HS&G 2008a), this topsoil berm would be kept moist and vegetated by hydroseeding to minimize the loss of soil. A 25-foot high, horseshoe-shaped berm of sand and gravel would be constructed around the crusher, and a 20-foot high working stockpile of material would be maintained between the crusher and the concrete/asphalt plants. Approximately 6.3 million cubic yards of alluvial material would be removed from the 111 acre permit area over 10 years.</p> <p><i>Metals-impacted soils:</i> According to EPA EHSS rules, property owners with lands of concern within the administrative boundary of the EHSS are required to work with the DEQ, Lewis & Clark County and the EPA</p>

RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
	<p>to determine whether remedial action must occur on a property prior to disturbance. Based on the results of the October 2007 soil analysis (TetraTech 2007), HS&G has developed a work plan to conduct additional soil sampling and analysis to better characterize the site (TetraTech 2008). Based on the results of this additional soil sampling, HS&G would stockpile stripped topsoil with lead levels above the 500 ppm action/screening level separately from soil with lower lead levels. Based on review of the October 2007 soil sample results (Tetra Tech 2007), there is a correlation between the concentration of lead and arsenic (Reed pers. comm. 2008) so that removal of soil containing lead concentrations above the 500 ppm screening level would also be protective of arsenic. The October 2007 soil samples exhibited cadmium concentrations below or near the detection limit of 24-29 ppm.</p> <p>The resulting berm would be mulched and hydroseeded with a grass seed mix. HS&G's Plan of Operations (HS&G 2008b) does not specify what would be done with the stockpiled contaminated soil at the time of site reclamation. Under permit conditions, HS&G would be required to obtain approval from EPA and the DEQ Superfund Program regarding the ultimate fate of this material before the site is reclaimed (see Section 22.C). Potential options may include leaving the contaminated soil on-site in the vegetated berm, burying the soil on-site in a manner protective of underlying groundwater quality, removing the contaminated soil to an approved disposal facility, or other disposal or treatment methods approved by EPA and the DEQ Superfund Program. HS&G would be responsible for providing any necessary clean topsoil needed for reclamation to replace the contaminated soil.</p> <p><i>Reclamation:</i> The site would be reclaimed to pasture land for grazing livestock with a wheatgrass seed mix. The reclaimed surface would be sloped from the undisturbed surrounding ground into the pasture bowl to a maximum depth of 40 feet below grade. The reclaimed side slopes would be at a gradient of 4:1 or flatter.</p> <p>Backslopes would be scarified or disked if needed. An average of 6-8 inches of topsoil with lead levels less than the 500 ppm action/screening level would be replaced and then disked prior to seeding. For reclamation purposes, topsoil in the berm with lead concentrations above 500 ppm would be replaced with non-impacted soil brought to the site, as necessary. The office/facilities area and all internal roads would be reclaimed by removing surfacing material, ripping, scarifying, topsoiling and seeding. Fertilizer would be applied at the time of seeding. No mulch would be used.</p> <p><u>Cumulative Impacts:</u> No cumulative impacts to soils and geology were identified as a result of the Proposed Action.</p>
<p>2. WATER QUALITY, QUANTITY AND DISTRIBUTION: Are important surface or groundwater resources present? Is there potential for violation of ambient water quality standards, drinking water maximum contaminant levels,</p>	<p><u>Existing Environment:</u> There are no permanent surface water sources present within the proposed permit area or within 1,000 feet of the proposed permit area. The closest permanent natural surface water feature is Prickly Pear Creek, located approximately 1¼ mile to the southwest of the proposed permit area. The Helena Valley Canal, a seasonal irrigation ditch, runs along the north boundary of the HS&G property approximately 1,000 feet from the proposed permit area</p>

RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
or degradation of water quality?	<p>(Figure 2). It appears as though the eastern portion of the property had been flood irrigated at some time in the past and water ditches that supplied water for the siphon pipes are present on the eastern half of the property, running in a northeasterly direction. Prickly Pear Creek has been impaired by lead and arsenic as a result of the ASARCO smelting operation and mining upstream of the smelter. The proposed permit area is identified as an area of concern because it had been flood irrigated with water from Prickly Pear Creek in the past (Brown pers. comm. 2007).</p> <p><i>Water use:</i> According to GWIC (2008) and information obtained from HS&G (2008b), there are five wells located within the proposed permit area or within the HS&G property (Figure 2). Three of the four groundwater wells located on the HS&G property were measured on February 21, 2007. The depth of water in the three wells ranged from 45.8 to 46.3 feet below the ground surface. A second set of groundwater measurements was obtained from all four wells in January 2008. The depth of water in the four wells ranged from 44.8' to 49.6' below the ground surface. Well logs in the immediate vicinity of the proposed gravel pit generally show sand and gravel deposits in the upper portion of the aquifer (GWIC 2008). There are over 150 wells within ½ mile of the proposed gravel pit with an average yield of 26 gpm (GWIC 2008).</p> <p>The proposed permit area is in DNRC Basin 41I (Missouri River above Holter Dam). HS&G currently holds two water rights for this property. The water rights are for surface water from Prickly Pear Creek via a headgate on the Stockburger Ditch. The two water rights would allow HS&G to divert up to 5.96 cubic feet per second (cfs) out of the Stockburger Ditch during periods of high water in Prickly Pear Creek. After high water flows have receded, HS&G could only divert 1.60 cfs from the ditch. The current water rights would allow HS&G to use water from Prickly Pear Creek from April 15 to October 15 for the purposes of flood irrigation (DNRC WRQS 2007).</p> <p><i>Water quality:</i> There is no information regarding current water quality on the HS&G property. HS&G has developed a Groundwater Sampling and Analysis & Contaminant Detection Response Plan (TetraTech 2008c) (Attachment 4). One of the objectives of this plan is to document baseline groundwater quality, elevation, gradient and flow direction. The first year of groundwater monitoring data would be collected prior to the pit reaching a depth of 25 feet below grade.</p> <p><u>Impacts from Proposed Action:</u> HS&G (2008b) states that excavation is proposed to extend to approximately 40 feet below ground grade, but that excavation would not occur within 5 feet of the water table. HS&G has developed a Groundwater Sampling and Analysis & Contaminant Detection Response Plan (TetraTech 2008c) (Attachment 4). One of the objectives of this program is to document baseline groundwater quality, elevation, gradient, and flow direction. This data would be used to guide the maximum depth of the mining activities.</p> <p>Stormwater would be controlled and contained internally. Gravel wash water and stormwater would be recycled by discharging it into a series</p>

RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
	<p>of unlined, 80,000 square foot settling ponds. The initial settling pond would be located immediately north of the crusher pad area (Figure 2). The settling ponds would consist of a series of two to four ponds, depending upon what is necessary to ensure clean wash water is being recycled back to the wash plant. The wash plant would be located in the crusher pad area. The settling ponds would initially be unlined, but operation of settling ponds ultimately results in the ponds being lined with natural silt and clay.</p> <p><i>Water use:</i> According to HS&G (2008c), the concrete batch plant would use 2.6 million gallons/year of groundwater. Groundwater consumption for other uses include winter dust control (0.65 million gallons/year), concrete aggregate stockpile watering (1.3 million gallons/year), landscaping (0.56 million gallons/year), asphalt plant (0.16 million gallons/year), and the dispatch office (0.07 million gallons/year). All other water used at the site would be derived from the Helena Valley Irrigation Canal.</p> <p><u><i>On-site Sources:</i></u> Besides stormwater runoff and recycled gravel wash water, water would be obtained from four or five deep on-site wells (>250 feet deep). One such existing well is currently used to water livestock. Two or three new wells may need to be installed to supply the concrete plant, dust control, dispatch office and asphalt plant. Any increase in withdrawal from existing wells or planned installation of new wells would need to meet DNRC permitting requirements and/or exemptions for small water supply wells. These exemptions require wells to pump no more than 35 gpm or 10 acre-feet per year and cannot be manifolded into the same system. If five wells are used and are not manifolded into the same system, HS&G could withdraw up to a combined total of 175 gpm or 50 acre-feet (16.3 million gallons) annually from the five wells. DNRC rules do not require exempt wells to be tested to determine if the well could cause adverse impacts to water supplies in the immediate vicinity of the well. Because Basin 411 is a "closed basin", HS&G would need to apply to change an existing water right to mitigate for any new well use that would exceed the 35 gpm/10 acre-feet limitations.</p> <p>HS&G anticipates that use of water from on-site wells may not be necessary for the first year of aggregate production. Water for operations at the site would instead be hauled from an off-site source.</p> <p>Groundwater wells will be used to supply water for the concrete batch plant, winter dust control, winter concrete aggregate stockpile watering, the asphalt plant, landscaping, and the dispatch office, and HS&G has agreed to a permit condition that groundwater may be withdrawn only for these uses. HS&G estimates that its annual groundwater withdrawal for these uses will be 5.34 million gallons/year (HS&G 2008c).</p> <p>In accordance with the Work Plan for Monitoring Well Installation and Routine Monitoring (TetraTech 2008b) (Attachment 4), HS&G would install five monitoring wells at the site. Two would be located on the south side of the property (hydraulically upgradient) and three would be located on the north side of the property (downgradient). In accordance</p>

RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
	<p>with the Groundwater Sampling and Analysis Plan & Contaminant Detection Response Plan (TetraTech 2008c) as modified by permit conditions, depth to groundwater in these wells would be monitored monthly during the five year to establish detailed information on seasonal groundwater fluctuations at the site. The first year of monthly groundwater level monitoring would be conducted prior to excavating the pit deeper than 25 feet below grade. After the first five years, groundwater levels would be measured on a semiannual basis to document hydrographic trends over time. These data can be used to evaluate any changes in groundwater levels that develop across the site as operations are developed.</p> <p><u>Off-site water source:</u> As the result of public comments on the draft EA, HS&G sought an off-site water source for crusher/wash plant operations from the Helena Valley Irrigation District. The crusher/wash plant would use approximately 1,950 gpm for a maximum of 20 hours/day, 300 days/year. The district has unanimously voted to sell HS&G water from the canal located north of the property (Figure 2), pending final approval of the Bureau of Reclamation (BOR). HS&G plans to install an 18" canal valve and divert the water through a ditch into the holding pond(s). HS&G has requested up to 7 cfs per day for one to two weeks in the spring to fill the pond(s). Once the ponds were filled, HS&G's demand from the canal would change to a maximum of 2 cfs per day for the remainder of the crusher/wash plant season (no winter use).</p> <p>HS&G's application to the Irrigation District and the BOR includes a change of water use to commercial/industrial activities. This water source would typically be available from March 20 to December 9 (DNRC Water Right # 411 40820-00). Crusher/wash plant operations are not typically conducted during freezing weather conditions. Water used in crusher/wash plant operations would flow to settling ponds and would be recycled for operational uses once sediment had settled out sufficiently. Use of water from the irrigation district would reduce the amount of water that would otherwise need to be obtained from on-site sources.</p> <p>Due to the variable availability of water from Prickly Pear Creek, HS&G does not plan to utilize its existing surface water rights to obtain water from the creek via the Stockburger Ditch. In addition, because water from Prickly Pear Creek may contain heavy metals, HS&G has agreed to a permit condition that water from Prickly Pear Creek will not be used at the operation.</p> <p><u>Water quality:</u> HS&G has developed a Groundwater Sampling and Analysis & Contaminant Detection Response Plan (TetraTech 2008c) (Attachment 4). One of the objectives of this plan would be to conduct regular routine groundwater monitoring during active gravel mining activities to detect groundwater contaminants if present.</p> <p>A Spill, Prevention, Control and Countermeasures (SPCC) Plan has been prepared for the proposed permit area (HS&G 2007c). Seven aboveground storage tanks would be used to store fuel and asphaltic cement. These tanks would be secondarily-contained within concrete</p>

RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
	<p>enclosures. Fuel in mobile fuel containers used for portable crushing/screening operations would be placed in plastic-lined temporary secondary containment pits. Chemicals used in the concrete plant would be stored in manufacturer-supplied plastic tanks. These tanks would be placed in a supply room with a concrete slab floor and foundation walls.</p> <p>Asphalt hot mix that may be returned to the proposed permit area would be placed onto a small stockpile before being crushed into a recycled asphalt product.</p> <p><u>Cumulative Impacts:</u> The Red Fox subdivision proposed for the northwest corner of section 20 adjacent to the northeast corner of the HS&G property has been denied. There is no current application related to this subdivision or the larger parcel, the Garber Ranch, on file at the Lewis & Clark County Planning Department (Morgan pers. comm. 2008). Therefore, it would not be considered in Cumulative Impacts.</p> <p>Other aggregate mining permit areas within two miles of the proposed LHD Pit include the active HS&G Canyon Ferry Road Pit, the active HS&G Big Sky Ready Mix pit and the permitted but undeveloped HS&G Foster pit (Figure 1). The Canyon Ferry Road Pit is scheduled to cease operations in summer 2009; therefore, there would be no further water consumption at this facility. The Big Sky Ready Mix pit would continue operations until 2012. Groundwater use from the existing wells at the proposed pit would cumulatively add to an increase in groundwater consumption in the East Helena Valley until 2012. The Foster pit would not be developed in conjunction with the proposed LHD pit.</p>
<p>3. AIR QUALITY: Would pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?</p>	<p><u>Existing Environment:</u> The predominant wind direction in the area is to the east and north (Brown pers. comm. 2007). The site is not located within a Class I Airshed. East Helena is an EPA-designated non-attainment area for lead and sulfur dioxide.</p> <p><i>Metals-impacted dust:</i> The proposed permit area is located within the administrative boundaries of the EHSS (Brown pers. comm. 2007). Lands within the site are impacted with lead and arsenic as the result of historic lead smelting operations at the former ASARCO smelting facility in East Helena (TetraTech 2007). The proposed permit area is located within an area of concern due to its proximity to the former smelter and former flood irrigation of the site using water from Prickly Pear Creek (Brown per comm. 2007). Soil at the site has been impacted by aerial deposition of materials release from the smelter, or by metals dissolved in the irrigation water obtained from Prickly Pear Creek. Aerially deposited particles may have been reworked and concentrated locally by the flood irrigation process. Sixteen soil samples were collected from the site in October 2007 and were analyzed for lead, arsenic and cadmium. Elevated lead was present in the samples above the EPA action/screening level of 500 ppm with concentrations ranging from 398 ppm to 1,711 ppm. Elevated arsenic was present in the samples above the EPA soil screening level of 14.5 ppm with concentrations ranging from 43 ppm to 175 ppm. Cadmium was measured in one of the sixteen samples at a concentration of 30</p>

RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
	<p>ppm (TetraTech 2007). The remainder of the samples exhibited cadmium concentrations below the laboratory detection limit of 24-29 ppm. Although the EPA Region 9 soil screening level for cadmium is 4 ppm, the Human Health Risk Assessment for Residential Soil in East Helena (Kleinfelder 1995) used a soil screening level of 274 ppm (Reed pers. comm.)</p> <p><u>Impacts from Proposed Action:</u> Dozers, loaders, crushers and trucking equipment typically cause dusty conditions in disturbed soil sites. However, crushers and asphalt plants are regulated for dust and smoke emissions, and the equipment used must be tested and approved by DEQ. HS&G has developed a Dust Mitigation Plan for the proposed LHD pit that controls dust related to stripping activities, soil berms, the entrance and access road off Lake Helena Drive and minor access/ haul roads within the operation (Attachment 3). This plan has been approved by the East Helena Lead Program and DEQ Superfund Program (LEAP 2008, DEQ 2008). Implementation of the Dust Mitigation Plan would be a requirement of HS&G's opencut mining permit.</p> <p>The operator of any crushing operation, asphalt plant or concrete plant must comply with the state air quality standards as specified in the applicable air quality permit limits for each facility. These permit limits would include the regulation of particulate emissions, nitrogen oxides, carbon monoxide, sulfur dioxide and VOCs. HS&G would install a new asphalt plant and new concrete plant with modern air quality controls. HS&G would install a "blue smoke control" unit on the asphalt batch plant to control the emission of tiny droplets of petroleum in smoke that create air quality and odor impacts. Such measures reduce opacity limits to as low as 5 percent. Additionally, modeling is conducted on such sources operating in these areas during the winter months, with further restrictions being imposed on facility production and hours of operation, if necessary.</p> <p><i>Metals-impacted dust:</i> According to EPA EHSS rules, property owners with lands of concern within the administrative boundary of the EHSS are required to work with the DEQ, Lewis & Clark County and the EPA to determine whether remedial action must occur on a property prior to disturbance. Based on the results of the October 2007 soil analysis (TetraTech 2007), HS&G developed a work plan to conduct additional soil sampling and analysis to better characterize to site (TetraTech 2008). Analytical results from this soil sampling event would be used to guide the salvage and stockpiling of metals impacted topsoil in accordance with the approved Dust Mitigation Plan (HS&G 2008a). The Dust Mitigation Plan (Attachment 3) would provide controls on the amount of dust generated by the operation. Implementation of the Dust Mitigation Plan would be a requirement of HS&G's opencut mining permit.</p> <p><u>Cumulative Impacts:</u> Due to the institutional and technological air quality controls and the Dust Mitigation Plan, there would be no significant impacts to air quality anticipated. Therefore, there would be no cumulative impacts.</p>
4. VEGETATION COVER,	<u>Existing Environment:</u> The proposed permit area is vegetated with a

RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
<p>QUANTITY AND QUALITY: Would vegetative communities be permanently altered? Are any rare plants or cover types present? Weed control plan?</p>	<p>pasture community of crested wheatgrass and alfalfa. Vegetative cover is sparse with a minor cover of noxious weeds including spotted knapweed, Canada thistle, leafy spurge and dalmation toadflax.</p> <p>There are no threatened, endangered or sensitive (TES) plant species that are known to occupy, or have the potential to occupy, the proposed permit area (MNHP 2007).</p> <p><u>Impacts from the Proposed Action:</u> Trees and shrubs would be planted along the perimeter of the property where HS&G identified that they would help to mitigate visual impacts on neighboring residences. HS&G has agreed to a permit condition requiring it to plant, maintain, and, if necessary, replace vegetation on berms and vegetation planted for visual screening as determined necessary by the DEQ to minimize visual impacts on residential areas to the degree practicable (See Section 22.C).</p> <p>A drip irrigation system would be installed to provide necessary water and temporary fencing would be used to protect the trees and seeded areas for at least two growing seasons.</p> <p>The Proposed Action would remove the current vegetative community but reclaimed areas would be seeded to a pasture mix compatible with the post mine land use. The species composition would then differ from the current, introduced species, but would provide comparable cover and production for pasture.</p> <p>HS&G has submitted a Noxious Weed Control Plan for the proposed permit area. The Lewis & Clark Weed Coordinator stated that HS&G would be in compliance with weed district requirements for the proposed LHD operation (HS&G 2007b).</p> <p><u>Cumulative Impacts:</u> There would be no cumulative impacts to vegetation as a result of the Proposed Action.</p>
<p>5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS: Is there substantial use of the area by important wildlife, birds or fish?</p>	<p><u>Existing Environment:</u> The proposed permit area is likely used by large ungulate game species such as white-tailed deer and antelope. Wildlife using the area commonly cross Canyon Ferry Road east of Lake Helena Drive. However, the pasture cover on the proposed permit area is sparse relative to the agricultural lands that surround the HS&G property and would not provide as high of quality forage for these species. The proposed permit area supports populations of small burrowing mammals and insects, which in turn provide a source of prey for song birds and raptors. A discussion of TES wildlife species is provided below in Section III.6.</p> <p><u>Impacts from Proposed Action:</u> The Proposed Action would remove the existing cover and forage until 2017. However, suitable and improved cover and forage is available on adjacent properties surrounding the proposed permit area and in the region.</p> <p><u>Cumulative Impacts:</u> Ungulate species currently experience a danger from animal-vehicle interactions in this area due to existing traffic from residential and commercial development. Residential growth in the area has contributed to increased traffic and an increase in animal-</p>

RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
	<p>vehicle fatalities; the development of the LHD pit would add to the risk of vehicle collisions with animals. This increased risk would occur regardless of the implementation of the Proposed Action due to the continued residential growth in the Helena Valley and East Helena area.</p>
<p>6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES: Are any federally listed threatened or endangered species or identified habitat present? Any wetlands? Species of special concern?</p>	<p>The Montana Natural Heritage Program (MNHP) did not identify any TES wildlife species or species of special concern that have the potential to inhabit or use the proposed permit area (MNHP 2007).</p> <p>A site reconnaissance did not reveal the presence of wetlands on the proposed permit area. There were no wetlands as identified by the National Wetland Inventory (NWI) database (NRIS 2008).</p>
<p>7. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?</p>	<p><u>Existing Environment:</u> There was one cultural resource site identified within the boundary of the HS&G property (SHPO 2007). The Helena Valley Canal is located on the north boundary of the property and has cultural value because of its age and history of irrigation in the Helena Valley (Murdo pers. comm. 2008).</p> <p><u>Impacts from Proposed Action:</u> If approved by the BOR, HS&G would construct an 18" canal valve at an appropriate location within the canal bank. Because of its cultural status, any alteration to the canal would need to be overseen by a BOR cultural resources specialist (Murdo pers. comm. 2008).</p> <p>According to the State Historic Preservation Office (SHPO), there is a low likelihood that other cultural sites could be impacted by the Proposed Action. No additional cultural resource inventory is necessary (SHPO 2007). However, if significant resources were found during excavation or construction, the operation would be routed around the site of discovery for a reasonable time until salvage could be conducted. The State Historic Preservation Office would be promptly notified.</p> <p><u>Cumulative Effects:</u> There would be no cumulative impact to historical and archaeological sites as a result of the Proposed Action.</p>
<p>8. AESTHETICS: Is the project on a prominent topographic feature? Would it be visible from populated or scenic areas? Would there be excessive noise or light?</p>	<p><u>Existing Environment:</u> The proposed permit area is currently pasture land with no structures. There is residential development to the north, west, southeast and southwest of the HS&G property. Undeveloped agricultural land lies to the south and east.</p> <p>HS&G completed an Environmental Noise Study for the proposed LHD pit (BSA 2008). Four residential noise locations were analyzed (Figure 2). The study determined that the existing day-night average noise level at the residences around the proposed site was 47 L_{dn} (dBA), which is typical for very light density to light suburban areas. The L_{dn} is used to describe the average noise at a location over a twenty-four hour period. The L₉₀ noise level is the single noise level that was exceeded during 90% of a measurement period and was 36 dBA around the site.. The L₉₀ is typically called the "ambient" noise level. The dominant noise source was traffic on Valley Drive and Canyon Ferry Road (BSA 2008).</p> <p><u>Impacts from Proposed Action:</u></p>

RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
	<p><i>Visuals:</i> The site would be visible from residential neighborhoods, Lake Helena Drive and Valley Drive. The crusher would be placed on a pad set 20 feet below grade to reduce visual impacts. The concrete batch plant and asphalt hot plant would be placed on a pad set 15 feet below grade. The portions of these operations that would remain above grade are as follows:</p> <ul style="list-style-type: none"> • The tallest structure would be the hot elevator and mix storage silos on the asphalt plant. Approximately 60 feet would extend above the existing grade. The silos are approximately 14 feet (width) X 40 feet (length). • The radial stacking conveyor(s) used to build the aggregate stockpiles (base aggregates & concrete sand) are the tallest “structures” associated with the crushing operations. These conveyors are temporary and would extend 20 feet above the existing grade. The remainder of the crushing equipment would be less than 30 feet above the plant or crusher site elevation(s). • The tallest structure associated with the crushing plant would be the cement silo. About 55 feet of this structure would be above grade. <p>Stockpiled recycled asphalt and concrete would be kept adjacent to the concrete and asphalt plants on the below-grade pad and would not be visible from above grade.</p> <p><i>Noise:</i> Lewis & Clark County and the State of Montana do not have ordinances or regulations that would limit the noise generated by gravel pits. The EPA identified outdoor L_{dn} noise levels less than or equal to 55 dBA as sufficient to protect public health and welfare in residential areas (EPA 1979). HS&G has agreed to a permit condition requiring it to meet the 55 L_{dn} dBA noise level at four monitoring locations north, west, and south of the permit area.</p> <p>The L_{dn} reading is a day/night average weighted to emphasize nighttime noise levels. Because HS&G will not operate at night, an L_{dn} requirement would allow noise levels substantially in excess of 55 dBA during the day. Therefore, the Department determined that a noise limitation based on a ten-minute average interval should also apply. HS&G has agreed to meet a ten minute average dBA of 60 L_{eq} dBA after the crusher is at 20 feet below grade. A dBA of 60 is within the moderate noise range (BSA, 2008). In addition, before the crusher is established at 20 feet below grade (1 to 2 years), the permit condition provides that the crusher may not cause an L_{eq} noise level, measured in 10 minute increments at the monitoring locations, to exceed 70 dBA during the first three months of crushing operations (before the berm is established) and 65 dBA after the first three months of operation and before the crusher pad is established at 20 feet below grade. The crusher could not be operated at the 70 dBA levels on Saturdays. The 70 dBA noise level is considered to be moderately loud and the 65 dBA noise level is considered to be at the low end of loud noise range.</p> <p>The L_{eq} metric gives a single number to describe the constantly</p>

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	<p>fluctuating instantaneous noise levels at a location over a period of time. An L_{90} noise level is the level that is exceeded 90 percent of the time over a measurement period. Comparing the L_{eq} noise levels of a noise source to L_{90} (ambient) noise levels at a residential noise location helps approximate whether a noise source would be audible, and how significantly the ambient environment would change due to a new noise source. Compared to the measured existing ambient (L_{90}) noise levels of 34 to 40 dBA, the sound increases indicate that the gravel pit operations would become the dominant noise sources.</p> <p>Additional mitigation that would be implemented by HS&G includes using strobe lights instead of back-up alarms on equipment. HS&G has also agreed to a permit condition that it will monitor and report noise levels semiannually until the Department determines that HS&G has established a consistent pattern of compliance. In addition, in order to limit truck noise, HS&G has agreed to a permit condition prohibiting use of compression brakes on Lake Helena Drive, the intersection of Canyon Ferry Road and Lake Helena Drive, Old Highway 12, and the intersection of Highway 12 and Old Highway 12 except in emergency situations.</p> <p><i>Light:</i> Downward-facing lights would be used to reduce the impacts of night-time lights; however, light would be created that might be visible to residences located closest to the operations. This requirement will be made a permit condition.</p> <p>Restrictions placed on the permit such as hours of operation, visual screening, limitations on crushers, and required reclamation in areas no longer needed for mining would reduce the impact of this operation. While some impacts cannot be avoided, restrictions placed on the permit would make reasonable reductions in the impact to local aesthetics. The permit area is surrounded by a 1,000-foot buffer zone to minimize potential impacts to adjacent roads and residences. A 12-foot high topsoil berm would be constructed along the Valley Drive side of the permit area using topsoil salvaged as the site is developed. The topsoil berm would hydroseeded and watered using a drip irrigation system. A 25-foot high berm of sand and gravel would also be constructed in a horseshoe shape around the crusher and loading area on the existing grade (Figure 2). A working stockpile of material would be maintained between the crusher pad and the concrete/asphalt batch plants; this stockpile would be approximately 20 feet high. These features would provide additional screening of pit operation structures, sound and light.</p> <p>In addition, trees and shrubs would be planted along other segments of the property perimeter where they would help to mitigate visual and sound impacts on neighboring residences. Temporary fencing would be used to protect plantings and seeded areas through at least two growing seasons. The property boundary is currently fenced and cattle guards would be placed on the access road to prevent any livestock access.</p> <p><i>Reclamation:</i> The site would be reclaimed to pasture land for grazing livestock with a wheatgrass seed mix. The reclaimed surface would be</p>

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	<p>sloped from the undisturbed surrounding ground into the pasture bowl to a depth of 40 feet. The reclaimed side slopes would be at a gradient of 4:1 or flatter. Backslopes would be scarified or disked if needed and topsoil would be disked prior to seeding. The office/facilities area and all internal roads would be reclaimed by removing surfacing material, ripping, scarifying, topsoiling and seeding. Fertilizer would be applied at the time of seeding.</p> <p><u>Cumulative Impacts:</u> Other aggregate mining permit areas within two miles of the proposed LHD Pit include the active HS&G Canyon Ferry Road Pit, the active HS&G Big Sky Ready Mix pit and the permitted but undeveloped HS&G Foster pit (Figure 1). The Canyon Ferry Road Pit would cease operations in summer 2009. The Big Sky Ready Mix pit would continue operations until 2012. Therefore, there may be a short-term cumulative impact to aesthetics until these other operations cease. The Foster pit would not be developed in conjunction with the proposed LHD pit.</p>
<p>9. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY: Would the project use resources that are limited in the area? Are there other activities nearby that would affect the project?</p>	<p>HS&G does not plan to utilize their existing water rights on Prickly Pear Creek due to the variable availability of water in Prickly Pear Creek and has agreed to a permit condition prohibiting use of water from Prickly Pear Creek at the operation. As indicated in section 2, HS&G would use approximately 5.34 million gallons of groundwater (HS&G 2008c) and the remaining water would come from the Helena Valley Canal or another source.</p> <p><u>Cumulative Impacts:</u> Other aggregate mining permit areas within two miles of the proposed LHD Pit include the active HS&G Canyon Ferry Road Pit, the active HS&G Big Sky Ready Mix pit and the permitted but undeveloped HS&G Foster pit (Figure 1). The Canyon Ferry Road Pit would cease operations in summer 2009; therefore, there would be no further water consumption at this facility. The Big Sky Ready Mix pit would continue operations until 2012. Groundwater use from the existing wells at the proposed pit would cumulatively add to an increase in groundwater consumption in the East Helena Valley until 2012. The Foster pit would not be developed in conjunction with the proposed LHD pit. There are over 150 wells within ½ mile of the proposed gravel pit with an average yield of 26 gpm (GWIC 2008). The Proposed Action would cumulatively add to water use in the East Helena valley when combined with the above water uses.</p>
<p>10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES: Are there other studies, plans or projects on this tract?</p>	<p>The proposed permit area is located within the administrative boundaries of the East Helena Superfund Site (Brown pers. comm. 2007). Further discussion is provided in Sections III.1, III.3, III.11 and III.16.</p>

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<p>11. HUMAN HEALTH AND SAFETY: Would this project add to health and safety risks in the area?</p>	<p>Heavy equipment and operating facilities including scrapers, trucks, loaders, hot plants, and crushers can create hazards for employees. The operator must comply with all MSHA and OSHA regulations. The operator must employ proper precautions to avoid accidents. The site is currently fenced with barbed-wire and would remain so for the life of the operation. Warning signs would be posted along the perimeter of</p>

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	<p>the HS&G property. In accordance with MSHA regulations earthen berms would be placed around portions of the pit where "high wall" conditions exist.</p> <p><i>Traffic Risks:</i></p> <p>Approximately 40,000 off-site round-trip deliveries would be made from the proposed pit per year. The primary truck route would be between Canyon Ferry Road and the access on Lake Helena Drive. This route is preferred because it would avoid the highly urbanized and high pedestrian-use areas in East Helena. Canyon Ferry Road would be used to access Helena and points off of U.S. Highway 12. Deliveries of material specifically for East Helena sites would go south on Lake Helena Drive into East Helena. These trucks making deliveries in East Helena would be on the roads in residential areas and near the R.H. Radley and Eastgate Schools. According to the trip generation and distribution portion of Traffic Impact Study completed for HS&G, Lake Helena Drive south of the proposed permit area access point (residential areas and schools) would not experience significant increased truck traffic above what is currently observed on this section of Lake Helena Drive (WWC 2008a,b). A traffic signal may be warranted at the intersection of Canyon Ferry Road and Lake Helena Drive; however, MDT is unlikely to approve a signal at this location because of the impacts to the efficiency to the road and the lack of adequate line of sight (WWC 2008a).</p> <p>Impacts on county roads such as Lake Helena Drive where gravel trucks enter from privately-owned gravel pits are the responsibility of the operator and Lewis & Clark County. The Lewis & Clark County Public Works Department is the permitting agency for the approach onto Lake Helena Drive. The Public Works Department has issued the approach permit for this operation. According to the Lewis & Clark County Public Works Department, HS&G must clean spilled gravel products from the highway in the immediate vicinity of the pit approach (Nisbet pers. comm. 2008).</p> <p>The traffic study commissioned by HS&G found that none of the accidents reported for Lake Helena Drive between 1997 and 2006 involved pedestrians (WWC 2008a). All seven accidents south of Canyon Ferry Road involved only vehicles; only one involved two vehicles, one involved an impact with a wild animal, and another involved an off road overturn. Given this information it does not seem likely that the additional traffic generated by HS&G would create a significant increase in accidents on Helena Valley Drive nor cause an increase in vehicle/pedestrian accidents. Nevertheless, HS&G has agreed to a permit condition that prohibits it from driving haul trucks past the Eastgate and Radley schools from 7:45 am to 9:00 am and from 3:00 pm to 4:00 pm on school days.</p> <p>Eight accidents occurred on Canyon Ferry Road between 1997 and 2006 at the intersection with Lake Helena Drive. All "eight accidents were caused when a northbound or southbound vehicle failed to yield to an eastbound or westbound vehicle was struck at a right angle" (WWC 2008a). The current flashing light at the intersection is meant to</p>

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	<p>warn all traffic about the intersection. People in cars on Lake Helena Drive would be at a disadvantage compared to a gravel truck driver who would be sitting up higher and have a better view of oncoming traffic on Canyon Ferry Road.</p> <p>According to the traffic study, placement of a stop sign at the entrance of the access road from the operation to Lake Helena Drive pit would reduce the danger of vehicle accidents. HS&G has agreed to a permit condition requiring the stop sign.</p> <p><i>Metals-impacted dust:</i> According to EPA EHSS rules, property owners with lands of concern within the administrative boundary of the EHSS are required to work with the DEQ, Lewis & Clark County and the EPA to determine whether remedial action must occur on a property prior to disturbance. Based on the results of the October 2007 soil analysis (TetraTech 2007), HS&G has developed a work plan to conduct additional soil sampling and analysis to better characterize to site (TetraTech 2008a). Analytical results from this soil sampling event would be used to guide the salvage and stockpiling of metals impacted topsoil in accordance with the approved Dust Mitigation Plan (HS&G 2008a). The Dust Mitigation Plan (Attachment 3) would provide controls on the amount of dust generated by the operation. This plan has been approved by the Lewis & Clark County LEAP and DEQ Superfund (LEAP 2008, DEQ 2008). Implementation of the Dust Mitigation Plan would be a requirement of HS&G's openpit mining permit.</p> <p>The reclaimed pasture bowl would be above the water table and would not contain water. Runoff water would discharge to the subsurface through the bottom of the reclaimed bowl. The water in the settling ponds would be continuously run through the gravel washing operation and would not represent a continual "standing" water source that would encourage mosquito larval growth.</p> <p>Cumulative Impacts: There are no cumulative impacts to Heath and Safety anticipated.</p>
12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Would the project add to or alter these activities?	<p>The proposed permit area is currently agricultural land owned by HS&G. HS&G allows some leased grazing on the proposed permit area. The East Helena Valley is predominantly agricultural and residential in nature. Other aggregate mining permit areas within two miles of the proposed LHD Pit include the active HS&G Canyon Ferry Road Pit, the active HS&G Big Sky Ready Mix pit and the permitted but undeveloped HS&G Foster pit (Figure 1). The Canyon Ferry Road Pit would cease operations in summer 2009. The Big Sky Ready Mix pit would continue operations until 2012. The Foster pit would not be developed in conjunction with the proposed pit.</p>
13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT: Would the project create, move or eliminate jobs? If so, estimated number.	<p>The Proposed Action would not eliminate any jobs. HS&G would initially use staff from its existing Canyon Ferry Road operation. The potential for the creation of jobs has not been determined.</p>

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14. LOCAL AND STATE TAX BASE AND TAX REVENUES: Would the project create or eliminate tax revenue?	<p>Operating an aggregate mining operation on the proposed permit area would initially result in an increase in the taxes paid to the county by HS&G. Income generated by HS&G would be taxed accordingly by the State and Federal government. However, with the eventual closure of gravel operations at the Canyon Ferry Road site, the net gain in taxes would not be substantial.</p>
15. DEMAND FOR GOVERNMENT SERVICES: Would substantial traffic be added to existing roads? Would other services (fire protection, police, schools, etc) be needed?	<p><u>Existing Environment:</u> The 2007 average daily traffic (ADT) on Lake Helena Drive was 2,574 trips per day. This traffic volume is estimated to increase at an average growth rate of 5% per year. The intersection of Canyon Ferry Road and Lake Helena Drive currently operates at a stable flow with slight delays (Level of Service B). Lake Helena Drive is classified as a minor collector roadway and has a 24 foot wide paved surface. This width does not meet the Lewis & Clark County road standard of 28 feet of paved surface. Morning peak hours at this intersection occur between 7:30 and 8:30 a.m. and evening peak hours occur between 5 and 6 p.m.. The existing 25-foot turning radius at the intersections of Lake Helena Drive/Canyon Ferry Road and Lake Helena Drive/Old Highway 12 cannot accommodate the turning movement of a typical truck without obstructing on-coming traffic (WWC 2008a).</p> <p><u>Impacts from Proposed Action:</u> Traffic would increase on Lake Helena Drive from 2,574 trips per day average daily traffic (ADT) to 2,936 trips per day ADT (14% increase) as a result of the Proposed Action. This would still classify Lake Helena Drive as a minor collector roadway. This minor increase in traffic does not require that HS&G improve Lake Helena Drive, since the deficiency in the road is due to existing traffic volumes and would not be the result of the proposed LHD pit (WWC 2008a,b). Under future conditions (2018), with or without the addition of traffic that would be generated by the proposed LHD pit, the intersection would operate at an unstable flow with intolerable delays (Level of Service E) in the morning peak period and approaching unstable flow with tolerable delay (Level of Service D) in the evening peak period. This is primarily due to the growth in the area and increasing traffic due to that growth (WWC 2008a). MDT has stated that the Canyon Ferry Road improvement project would begin in 2009; however, until the contract is awarded it is unknown how long the project would take to complete (Skinner pers. comm. 2008). During that time, alternative LHD pit truck delivery routes may periodically be necessary (MDT 2008).</p> <p>According to WWC (2008a), the shoulder radius at the intersections of Lake Helena Drive/Canyon Ferry Road and Lake Helena Drive/Old Highway 12 should be increased from 25 feet to 50 feet wide to allow large trucks to negotiate the turn without obstructing traffic. MDT stated that the shoulders at these intersections should be improved to accommodate a WB-67 design vehicle (tractor trailers) (MDT 2008). MDT is planning improvements to Canyon Ferry Road and that design would accommodate large truck turning movements at the Lake Helena Drive/Canyon Ferry intersection (MDT 2008, WWC 2008a). If HS&G begins operations before MDT's improvements on Canyon Ferry Road are completed, MDT suggests that HS&G submit design plans for MDT approval for intersection improvements at Lake Helena Drive to allow</p>

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	<p>for safe turns of a WB-67 design vehicle. HS&G would also be responsible for coordinating the project with the remaining utilities (MDT 2008). The Lake Helena Drive/Old Highway 12 may be an alternate route during MDT's Canyon Ferry Road improvement project and would need to be improved at that time for safe turns of a WB-67 design vehicle.</p> <p>According to WWC (2008a,b), it is not anticipated that LHD pit truck traffic on Lake Helena Drive south of the proposed pit (i.e. residential East Helena and Eastgate School) would increase above what is currently observed on this section of Lake Helena Drive. WWC (2008a) recommended a 60-foot wide paved access road with a 75-foot shoulder radius onto Lake Helena Drive from the proposed pit. MDT stated that this approach should be limited to the width and geometry needed for a WB-67 design vehicle (tractor trailer). A traffic signal would be warranted at the intersection of Lake Helena Drive and Canyon Ferry Road by 2018. A right turn lane on Canyon Ferry Road to turn south onto Lake Helena Drive would be warranted during the same time period. These improvements are warranted due to an increase in traffic over the 10 year period and is not attributed solely to HS&G (WWC 2008a).</p> <p>The analyses presented in WWC (2008a,b) concluded that the access point into the proposed LHD pit would operate at a stable flow with slight delays (Level of Service B) through 2018 with or without the proposed pit. Traffic generated by the proposed pit could be adequately accommodated by the proposed access point and upgrades to Canyon Ferry Road and Lake Helena Drive.</p> <p>An In-Place Typical Section (pavement) analysis was performed for Lake Helena Drive between Canyon Ferry Road and Highway 12. The analysis concluded that the pavement thickness was acceptable for the projected increased truck traffic that would be associated with the proposed LHD pit (Pioneer 2007, 2008). However, an analysis performed by MDT indicated that an overlay to the pavement would likely be necessary during the life of the operation (MDT 2008).</p> <p><u>Cumulative Impacts:</u> Other aggregate mining permit areas within two miles of the proposed LHD Pit include the active HS&G Canyon Ferry Road Pit, the active HS&G Big Sky Ready Mix pit and the permitted but undeveloped HS&G Foster pit (Figure 1). The Canyon Ferry Road Pit would likely cease operations in summer 2009. The Big Sky Ready Mix pit would continue operations until 2012. The truck traffic from the proposed LHD pit would cumulatively add to truck traffic in the area until 2012. The Foster pit would not be developed in conjunction with the proposed LHD pit.</p> <p>The Red Fox subdivision proposed for the northwest corner of section 20 adjacent to the northeast corner of the HS&G property has been denied. There is no current application related to this subdivision or the larger parcel, the Garber Ranch, on file at the Lewis & Clark County Planning Department. Therefore, it would not be considered in</p>

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	Cumulative Impacts. In general, however, traffic could continue to increase along Lake Helena Drive and Canyon Ferry Road as the population in the Helena Valley and East Helena area grows.
16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS: Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?	<p>East Helena Superfund site - The proposed LHD Pit would be located within the administrative boundaries of the EHSS. According to EPA EHSS rules, property owners with lands of concern within the administrative boundary of the EHSS are required to work with the DEQ, Lewis & Clark County and the EPA to determine whether remedial action must occur on a property prior to disturbance. Based on the results of the October 2007 soil analysis (TetraTech 2007), HS&G has developed a work plan to conduct additional soil sampling and analysis to better characterize to site (TetraTech 2008).</p> <p><u>Interim Zoning</u> – The proposed site is located in the Helena Valley Interim Zoning District; the Zoning District does not prohibit this type of use for the property (Lewis & Clark 2007a). The Interim Zoning District is active until May 14, 2009 (Peterson pers. comm. 2008).</p> <p><u>MDT Canyon Ferry Road Improvement Project</u> – MDT plans major improvements to Canyon Ferry Road, including improvements to the intersection of Canyon Ferry Road and Lake Helena Drive. These improvements would include reconstruction of this intersection to accommodate a WB-67 design vehicle (tractor trailer) (MDT 2008). MDT has stated that the Canyon Ferry Road improvement project would begin in 2009; however, until the contract is awarded it is unknown how long the project would take to complete (Skinner pers. comm. 2008).</p>
17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES: Are wilderness or recreational areas nearby or accessed through this tract? Is there recreational potential within the tract?	<p>Local residents walk on the banks of the Helena Valley Canal. The proposed pit would not limit this activity but may impact the viewshed of those walking on the canal. Local residents use Valley Drive and Lake Helena Drive to reach Canyon Ferry Road on their way east to Canyon Ferry Lake or west to I-15 and perhaps driving to other recreational areas accessed from the interstate or roads off of Canyon Ferry Road. Development of the LHD Pit would not prevent the public from using Helena Valley Drive to reach recreational areas around the Helena area.</p>
18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING: Would the project add to the population and require additional housing?	<p>The Proposed Action would not result in additional housing in the area.</p>

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19. SOCIAL STRUCTURES AND MORES: Is some disruption of native or traditional lifestyles or communities possible?	<p>The East Helena Valley has both residential and agricultural development. The closest homes to the proposed permit area are over 1,000 feet away. There is the potential that operations could disturb residents located the closest to the operation. However, mitigation measures and changes to the Plan of Operations should adequately mitigate the disturbance potential of the proposed pit. There are no native communities in the vicinity of the proposed LHD Pit.</p> <p>There are other commercial properties including gravel extraction operations in the vicinity. Local people would notice a change in the daily operations at the site as topsoil is stripped and placed into berms and gravel is extracted, crushed and placed into stockpiles. This change in land use during the term of the operation could be perceived by some as a disruption of residential lifestyles.</p>
20. CULTURAL UNIQUENESS AND DIVERSITY: Would the action cause a shift in some unique quality of the area?	<p>The Proposed Action would not result in a shift in any unique cultural quality of the area.</p>
21. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:	<p>HS&G would be required to submit a Reclamation Bond as part of its permit. Except as discussed in section 15, there would be no infrastructure improvements that would need to be paid for by local, State or federal officials related to the proposed pit.</p> <p>Sale or market value of adjacent property may be negatively affected by the presence of a gravel pit, but DEQ has no specific information on this issue.</p> <p>The Legislature has specifically limited DEQ's authority to issues relating to taxable value. Under Montana law, an administrative agency, such as DEQ, has only those powers granted to it by the Legislature through enactment of statutes. The Legislature has given DEQ two means of mitigating the effects of gravel operations on adjacent property. First, DEQ has authority to protect air and water quality; to minimize noise and visual impacts to the degree practicable through use of berms, vegetation screens, and limits on hours of operation; and to otherwise prevent significant physical harm to adjacent land. Second, in order to protect and perpetuate the taxable value of property, land on which operations are completed must be graded and revegetated.</p> <p>The State contracted for a study to determine "whether the existence of a gravel pit and gravel operation impacts the value of surrounding real property." The study is entitled: "Gravel Pits: The Effect on Neighborhood Property Values," by Phillip J. Rygg, MAI, Appraisal Research Group, Kalispell, Montana, February 1998. Rygg's study involved some residential property near two gravel operations in the Flathead Valley. He concluded that these measures were effective in preventing decrease in taxable value of those lands surrounding the gravel pits. In his review of the study, Jim Fairbanks, Region 3 Manager of the Montana Department of Revenue, Property Assessment Division said:</p>

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	<p>"In the course of responding to valuation challenges of ad valorem tax appraisals, your reviewer has encountered similar arguments from Missoula County taxpayers regarding the presumed negative influence of gravel pits, BPA power lines, neighborhood character change, and traffic and other nuisances. In virtually ALL cases, negative value impacts were not measurable. Potential purchasers accept newly created minor nuisances that long-time residents consider value diminishing."</p> <p>Many residences have been constructed in the vicinity of the proposed site. A crushing and asphalt batching facility has the possibility of reducing the attractiveness of home sites to potential homebuyers seeking a rural/residential type of living environment. This operation could also affect the marketability of existing homes, and therefore cause a reduction in the number of interested buyers and may reduce the number of offers on properties for sale. There is a performance bond in place that would allow DEQ to reclaim the land under permit if the operator is unable to do so, which would protect taxable value over the long-term. DEQ is required by law to see that the work is done, as specified in the Plan of Operation (HS&G 2008b).</p>

22. Alternatives Considered:

A. No Action Alternative: An aggregate mining permit would not be issued to HS&G for the proposed LHD Pit by the DEQ. The land would remain in ownership by HS&G. Future use of the property by HS&G would be unknown and is beyond the scope of this assessment.

B. Proposed Action: An aggregate mining permit would be issued to HS&G for operations as described under Description of Proposed Action.

C. Agency-Modified Alternatives

The following would become enforceable conditions of the permit:

1. Hours of Operation

a. Except as provided in c and d below and in condition 6e, the crushing, gravel extraction, stripping, grading, and site development activities may be conducted only from 7:00 a.m. to 7:00 p.m., Monday through Friday. In addition, these operations may be conducted on Saturday if Saturday operations are necessary to meet a contract deadline or other exigent circumstances. Saturday operations must be limited to the time necessary to meet the contract deadline or other exigent circumstances but may not be conducted before 10:00 am or after 6:00 p.m.. These activities may not be conducted on Sundays.

b. Except as provided in c and d below, the concrete batch plant and the asphalt plant, or both plants, may be operated only from 5:00 a.m. to 8:00 p.m., Monday through Friday. In addition, these operations may be conducted on Saturday if Saturday operations are necessary to meet a contract deadline or other exigent circumstances. Saturday operation of the concrete batch plant must be limited to the time necessary to meet the contract deadline or other exigent circumstances but may not be conducted before 7:00 am or after 5:00 p.m. Saturday operation of the asphalt plant must be limited to the time necessary to meet the contract deadline or other exigent circumstance but may not be conducted before 10:00 am or after 6:00 pm. Neither the concrete batch plant nor the asphalt plant may be operated on Sundays.

c. The permittee may request a temporary variance from the limits in a and b to meet a contract deadline or other exigent circumstance. The request must describe the activities, the proposed hours of operation, the duration of the variance, and methods permittee will use to notify the public of the modified schedule. Permittee may operate under the modified schedule only if the Department, after consulting with the Lewis and Clark County Commissioners, approves the variance.

d. Before granting the request, DEQ may require permittee to provide noise monitoring data. After notice and a public hearing and consultation with the county commissioners, DEQ may extend the operating hours.

2. Water Quantity and Quality

a. i. Except as provided in iii, permittee may use groundwater for concrete aggregate stockpile watering or dust control only from October 15 to April 15.

ii. Except as provided in i and iii, permittee may use groundwater only for operation of the batch and asphalt plants, for landscaping, and for its dispatch office.

iii. Permittee may use groundwater on a temporary basis if water from the Helena Valley Canal becomes temporarily unavailable.

b. Permittee may not use water from Prickly Pear Creek for any activity regulated under this permit.

c. HS&G shall install a flow meter on each groundwater well and record the amounts withdrawn at each well. HS&G shall in its annual progress report include the amounts of groundwater used during the previous calendar year.

d. Permittee shall comply with its Work Plan for Monitoring Well Installation and Routine Monitoring (Tetra Tech, 1/31/08) and its Groundwater Sampling and Analysis & Contaminant Detection Response Plan (Tetra Tech, 1/31/08), except that it shall monitor and record groundwater levels on a monthly basis until August 1, 2013 and semi-annually thereafter. Permittee may not mine lower than 5 feet above the highest monitored groundwater level as established by the potentiometric maps produced in accordance with the work plan. Permittee shall provide the monthly water level monitoring data to the Department within 15 business days of the end of each monitoring period.

e. Permittee shall comply with its April, 2007, Spill Prevention, Control, and Countermeasures Plan.

3. Air Quality and Odor

a. Permittee shall comply with its approved Dust Mitigation Plan.

b. Permittee shall install, maintain, and operate an effective blue smoke control unit on its batch plant. In the event of a control unit malfunction, permittee may continue to operate the batch plant as long as it maintains compliance with the air quality permit and rules and repairs or replaces the unit as soon as practicable

c. If any truck or other equipment is not to be used for a period of 15 minutes or longer, permittee shall turn the engine off rather allowing the engine to idle until the equipment is used.

4. Soils

a. Permittee shall comply with Work Plan to Conduct Additional Soil Sampling and Analysis, Lake Helena Dive Gravel Pit (Tetra Tech, 1/28/08) to define the extent and magnitude of areas contaminated with elevated lead levels. Permittee shall separately stockpile soil and other material containing 500 ppm or greater levels of lead. Before permittee may dispose of or use in reclamation any soil or other material that contains in excess of 500 ppm of lead, permittee shall

consult with the East Helena Lead Education and Abatement Program and submit to and obtain the approval of DEQ and the Montana Office of EPA, for its plan to dispose of or use the soils. If the plan is disapproved, DEQ may, subject to EPA approval, require permittee to leave the contaminated soil on-site in a revegetated berm, bury the contaminated soil on-site, dispose of the contaminated soil in an approved facility, or treat or dispose of it in another manner approved by EPA.

- b. Permittee shall place on the area to be reclaimed a 6" to 8" layer of suitable soil.

5. Visual Impacts

- a. HS&G shall plant, maintain, and, if necessary, replace vegetation on berms and vegetation planted for visual screening as determined necessary by the Department to minimize visual impacts on surrounding neighborhoods to the degree practicable.

- b. HS&G shall screen and direct all lighting used for the operation in such a manner as to avoid deleterious impacts to the adjoining property owners or the neighborhoods.

6. Noise

- a. Use of compression brakes by delivery trucks owned and/or leased by the operator on Lake Helena Drive, the intersection of Canyon Ferry Road and Lake Helena Drive, Old Highway 12, and the intersection of Highway 12 and Old Highway 12 is prohibited except in emergency situations.

- b. On each day of operation, permittee may not cause noise levels at the four established monitoring locations identified in the Helena Sand and Gravel Lake Helena-Valley Drive Gravel Pit Environmental Noise Study (Big Sky Acoustics, February 29, 2008), that exceed 55 L_{dn} dBA.

- c. Except as provided in d below, permittee may not cause an L_{eq} noise level, measured in 10 minute increments, to exceed 60 dBA at any monitoring location identified in b.

- d. The crusher may not cause an L_{eq} noise level, measured in 10 minute increments, to exceed at any monitoring location identified in b:

- i. 70 dBA during the first three months of crushing operations;
 - ii. 65 dBA after the first three months of operation and before the crusher pad is established at 20 feet below grade; and
 - iii. 60 dBA after the crusher pad is established at 20 feet below grade .

- e. The crusher may not operate on Saturday or on any extended hours until it complies with the 65 dBA requirement.

- f. Noise levels at the site shall be monitored on a semiannual basis in accordance with a work plan submitted to and approved by the Department. Semiannual monitoring reports shall be submitted to the Department, as well as being posted on Helena Sand & Gravel's web site. Noise level monitoring must be performed for the first five years of operation or until the Department determines that a well developed and consistent pattern of compliance is established, whichever occurs later. The Department may for good cause require additional temporary monitoring.

7. Traffic

- a. Delivery trucks owned and/or leased by the operator may not travel through the Eastgate or Radley school zones located south of the site during the hours of 7:45 am to 9:00 am, and 3:00 pm to 4:00 pm, on school days

- b. Permittee shall install a stop sign on its access road at the entrance to Lake Helena Drive.

23. Public Involvement, Agencies, Groups or Individuals contacted:

- U.S. EPA
- Montana Department of Transportation
- Montana State Historic Preservation Office
- Montana Natural Heritage Program
- Montana Department of Natural Resources and Conservation
- Montana Department of Environmental Quality, Remediation Division
- City of East Helena
- Lewis & Clark County Planning Office
- Lewis & Clark County Public Works
- Lewis & Clark County Lead Abatement Program of Department of Environmental Health
- Lewis & Clark Water Quality District

24. Other Governmental Agencies with Jurisdiction, List of Permits Needed:

- Lewis & Clark Public Works Department – approach permit
- Helena Valley Irrigation District – approval to purchase water from Helena Valley Canal
- Bureau of Reclamation – approval to purchase water from Helena Valley Canal and change use to commercial or industrial
- Montana Department of Environmental Quality – air quality permit(s)
- Mine Safety and Health Administration - safety permit

25. Magnitude and Significance of Potential Impacts: Under the agency-modified alternative, air and water quality will be protected. Limitations on use of groundwater, monitoring requirements, aquifer characteristics, and legal limitations on water use would protect other water users. Requirements placed on the proponent by the Opencut Mining Act and permit conditions will ensure that impacts due to visuals, noise and light are acceptable. Compliance with the Dust Mitigation Plan and the terms of the air quality permit will ensure the protection of human health and welfare and surrounding land. There are no sensitive or critical vegetation or wildlife in the area. For these reasons and those described in the previous sections, the operation will not result in a significant impact on the human environment.

26. Regulatory Impact on Private Property: There are no alternatives that reduce, minimize, or eliminate impacts on HS&G's property rights. The analysis conducted in response to the Private Property Assessment Act indicates that the issuance of the permit would not have taking or damaging implications.

27. References:

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- Helena Sand & Gravel (HS&G). 2007c. Draft Spill Prevention, Control and Countermeasure Plan. Submitted to DEQ Opencut Mining Program April 2007.
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- Lead Education and Abatement Program (LEAP) of Lewis & Clark County. 2008. Email communication from Jan Williams (LEAP) to Jerry Bowser (HS&G) dated February 4, 2008.
- Miller, Martin (MNHP). Personal communication to Stephanie Lauer of PBS&J February 18, 2008.
- Montana Department of Natural Resources and Conservation (DNRC) Water Rights Query System (WRQS). Data accessed at <http://nris.mt.gov/dnrc/waterrights/default.aspx> on September 21, 2007.
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28. Recommendation for Further Environmental Analysis:

☐ EIS ☐ More Detailed EA ☒ None

Further Analysis

29. EA prepared by:

<u>Stephanie Lauer</u>	<u>Senior Environmental Scientist, PBS&J</u>
Name	Title

<u>Kathy Johnson</u>	<u>Environmental Impact Specialist, DEQ</u>
Name	Title

<u>Chris Cronin</u>	<u>Opencut Mining Program Supervisor, DEQ</u>
Name	Title

30. EA Reviewed By:

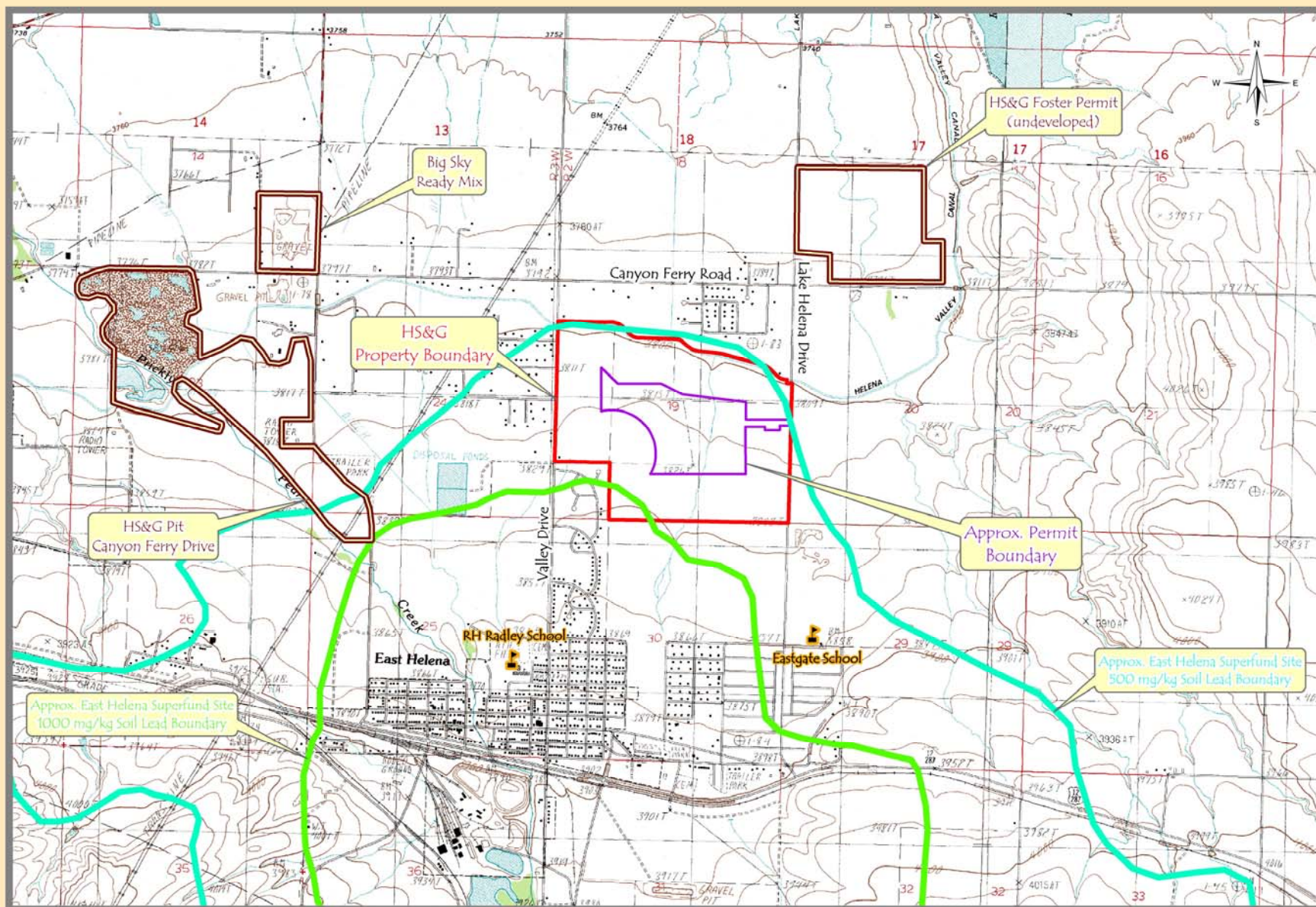
<u>John North</u>	<u>Chief Legal Counsel, DEQ</u>
Name	Title

31. EA Approved By:

Neil Harrington, Chief, Industrial Minerals Bureau, DEQ

ATTACHMENT 1

PROJECT MAPS



Relative locations of features and boundary lines are approximate.
A field survey is recommended for precise locations.

Prepared By: **PBSJ** 1120 Cedar Street
Missoula, MT 59802
H2594 (2/22) March 2008

Figure 1. Vicinity Map

Proposed Lake Helena Valley Drive Pit Site

0 0.25 0.5 1
Miles

Scale: 1:36000 1 inch = 3000 feet

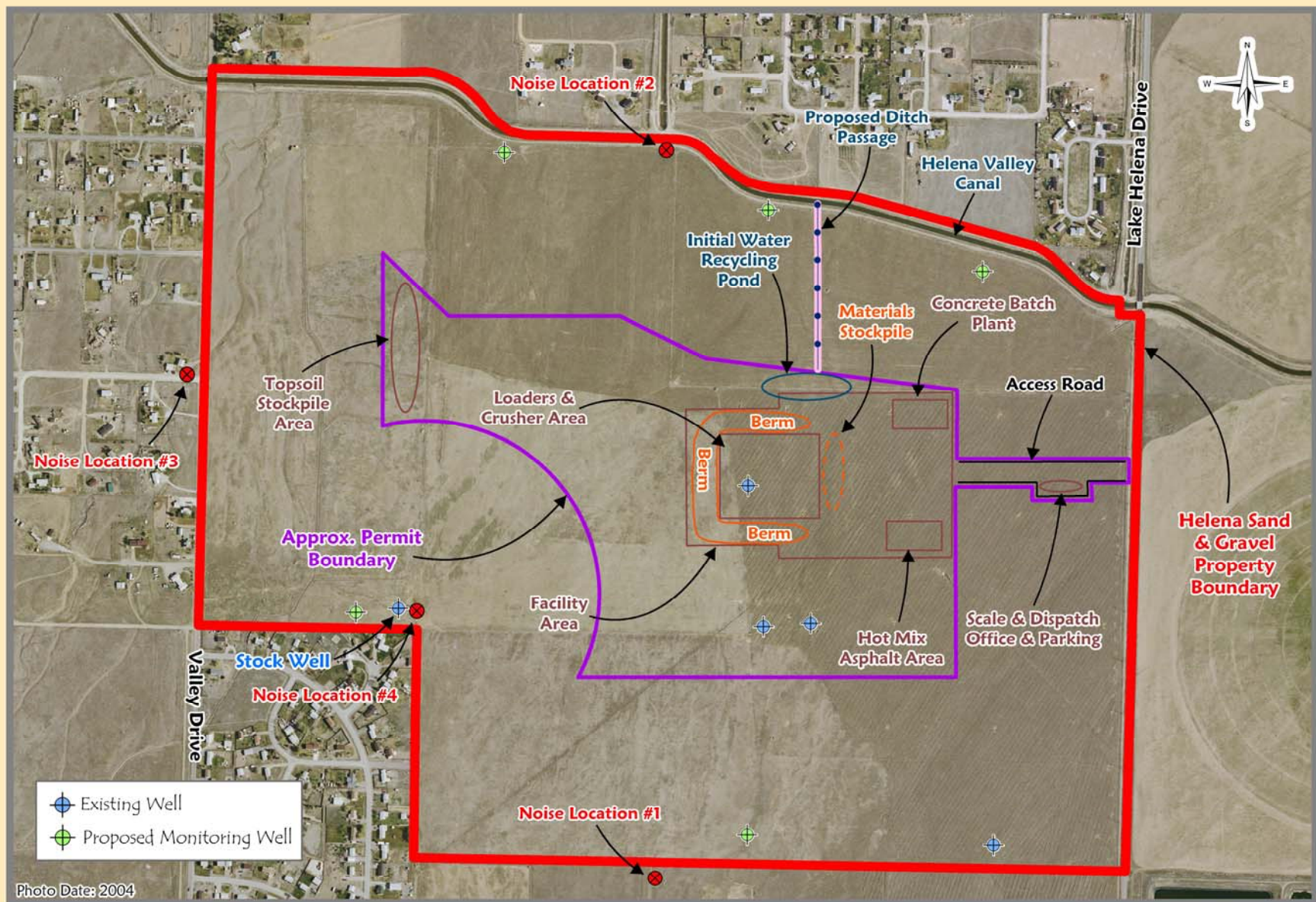


Figure 2. Site Map
Proposed Lake Helena Valley Drive Pit Site

ATTACHMENT 2
PUBLIC COMMENTS

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
Kim Kuderna	15	Aesthetics	a	Constructing the plant 15 feet below ground level will have marginal effect on its visual acceptability.	Section III.8
Jim Skinner	64	Aesthetics	a	The EA provided little actual information concerning how the placement of the berms and vegetation address the aesthetic impacts resulting from placing an industrial operation in close proximity to established residential subdivisions.	Section III.8
Jim Skinner	64	Aesthetics	a	The EA should be revised to include adequate analysis of the aesthetic impacts that will result from this operation and require appropriate implementation of an aesthetic mitigation plan to address the impacts.	Section III.8
Mike Renney	103	Aesthetics	a	The plant being 15 feet below the surface will not help, it will still be an eyesore.	Section III.8
Jesse Aber	107	Aesthetics	a	Noise, lights, and ever present clouds of dust are simply not appropriate for this area.	Section III.8
Linda Priest	116	Aesthetics	a	Neighbors should expect to experience noise, visual impacts, and increased dust in the area.	Section III.8
John and Joyce Yager	125	Aesthetics	a	This industrial operation will change that quality of life for all residents in the surrounding area.	Section III.8
Shelley Jucan	144	Aesthetics	a	Believe that the public would like to have an aesthetic plan in place prior to issuance of any permits. Additionally, said plan will provide documentation as to what is expected under this permit and avoid long legal battles once mining operations and impacts commence.	Section III.8
David Schnittgen	148	Aesthetics	a	Operation and associated berms will be visible from populated areas.	Section III.8
LaCasa Grande Subdivision/ Sue Leferink	28	Aesthetics	b	The two current HS&G pits have junk vehicles, used tires, mountains of junk concrete, oil barrels and junk heavy equipment. Will there be any measures in place to prevent such eyesores?	Section III.8
Kathy Moore	47	Aesthetics	c	Whether the DEQ regulates dust and smoke emissions or not the odor is simply inappropriate for a residential area.	Section III.8
Jim and Michelle Schweyen	115	Aesthetics	c	The smell of the batch plant will be undesirable for our neighborhood as well.	Section III.8
Becky Weinger	133	Aesthetics	c	Concerned about the light, noise and smell that will be produced.	Section III.8
Kathy Moore	47	Aesthetics	d	Aesthetically displeasing is the appearance of an industrial facility located in the middle of a flat piece of property. The cones and structures of a gravel operation will destroy our area. The operation will be prominent and it will be highly visible from the surrounding subdivisions.	Section III.8
David Schnittgen	148	Aesthetics	d	Wonder how much of the structures will be visible above the surface level.	Section III.8
Mike Mergenthaler	113	Aesthetics	e	Concerned about the noise, the hours of operation, the lighting and the mess that will be left when the pit is vacated.	Section III.8
John Johnson	75	Aesthetics	e	After productions cease it will remain an eyesore, a 40' deep hole in the ground.	Section III.8
David Schnittgen	148	Aesthetics	e	Proposed berms will appear to be giant scars on an area that is currently a very level pastureland, which is aesthetically pleasing and calming view.	Section III.8

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
Bryan & Joan Lewis	1	Air Quality	a	This will effect air quality.	Section III.3
Pat Helven	3	Air Quality	a	Concerns about air pollution.	Section III.3
Jare Holbert	7	Air Quality	a	Anything that could potentially cause air quality to go down shouldn't even be an option.	Section III.3
Laraine Tedesco	27	Air Quality	a	Dust pollution will go up.	Section III.3
Glenna Kendall	35	Air Quality	a	There would be much more dust and chemicals in the air, and HS&G could not possibly be able to keep the dust down with water.	Section III.3
Kathy Moore	47	Air Quality	a	They don't have access or legal right to enough water to perform dust suppression.	Section III.3
Kathy Moore	47	Air Quality	a	A reasonable and protective air quality protection plan should be shared with residents prior to the issuance of any permit.	Section III.3
William and Lisa Durbin	51	Air Quality	a	Effect of potential contaminants in the air and water	Section III.3
Keith and Margaret Jennings	52	Air Quality	a	A project of a gravel pit would produce disruption of the soil and put grains, molds, dust, and grass fragments in the air.	Section III.3
Jim Skinner	64	Air Quality	a	The EA provides no actual water application rates to be followed or analysis of effectiveness of applying water as an appropriate air pollution mitigation measure. It's likely that the proposed site will be operated in the same manner as the existing HS&G Canyon Ferry Rd. site that has been reported and confirmed as violating air pollution standards on numerous occasions.	Section III.3
Jim Skinner	64	Air Quality	a	EA should be revised to include adequate analysis of the expected level of additional air pollution produced as a result of this operation and the expected effectiveness of the proposed mitigation measures.	Section III.3
Cory Mabry	72	Air Quality	a	As an Eastgate resident I also deserve clean air.	Section III.3
Victor and Jonett Berg	96	Air Quality	a	Concerns of air quality.	Section III.3
Bob Burke	97	Air Quality	a	As part of the EA the Air Quality Division needs to meet with the East Helena School District to discuss the effect on area schools.	Section III.3
Jesse Aber	107	Air Quality	a	Airborne dust and minerals will surely degrade the air quality.	Section III.3
John and Joyce Yager	125	Air Quality	a	Concerns of air pollution.	Section III.3
Becky Weinger	133	Air Quality	a	Concerned about air pollution.	Section III.3
Bill and Judy Schwyer	137	Air Quality	a	Opposed due to air quality.	Section III.3
Robert Roddy	143	Air Quality	a	Air quality needs to be considered and addressed.	Section III.3
Shelley Jucan	144	Air Quality	a	Air quality is a concern.	Section III.3
Susan Spotorno and Sandra Milsten	145	Air Quality	a	Worried about poor air quality.	Section III.3
Great West Engineering / Bob Church	2	Air Quality	b	The Eastgate Water & Sewer Assoc. operates an irrigation pivot for the beneficial reuse of treated wastewater effluent form its lagoons. Crops grown on the property are used to feed stock. The Ea does not address impacts due to the potential accumulation of wind blown lead in the soils and crops on Eastgate's	Section III.3

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
				property.	
James & Candace Wilbur	9	Air Quality	b	Additional sampling should be required to characterize the entire area of operation, not just this limited testing that has been conducted to date.	Section III.3
James & Candace Wilbur	9	Air Quality	b	The proposed mitigation efforts of stockpiling and hydro seeding the contaminated soils to limit dust is flawed.	Section III.3
James & Candace Wilbur	9	Air Quality	b	The EA discusses stockpiling of these contaminated soils and reuse by spreading these soils in reclamation efforts. These soil movement activities and preparatory efforts for reclamation, including disking and scarification as mentioned in the EA, will generate fugitive dust emissions that are a risk to downwind residents.	Section III.3
James & Candace Wilbur	9	Air Quality	b	The site is located in an EPA designated non attainment area for lead and sulfur dioxide. Normal activities of gravel mining will increase dust.	Section III.3
Eastgate Village Water & Sewer Association, Inc./Paul Johnson	10	Air Quality	b	In moving these contaminated soils around, toxic dust will be created that will be driven into the air by the wind and redistributed in the areas surrounding the gravel site.	Section III.3
Eastgate Village Water & Sewer Association, Inc./Paul Johnson	10	Air Quality	b	Eastgate's sewage lagoon and effluent field fall squarely in the path of toxic dust created by the gravel pit. A natural balance is needed in both the lagoon and effluent field. Should the toxic dust settle there, it has a possibility of rendering the effluent field and/or sewage lagoon useless. This would effectively shut down all sewage treatment operations in the Eastgate area.	Section III.3
Eastgate Village Water & Sewer Association, Inc./Paul Johnson	10	Air Quality	b	The proposed bike/ped path along the east side of Lake Helena Dr. would be under constant assault from potentially toxic dust.	Section III.3
Nancy B.	22	Air Quality	b	School children will be subjected to the lead laced dust kicked up by the equipment.	Section III.3
Joseph Nye	26	Air Quality	b	Poor dust control may spread the already contaminated soils.	Section III.3
Ona Lepard	31	Air Quality	b	Crushing process particles with lead, arsenic and cadmium into the air. The top soil that is scraped into berms will blow through the air and into homes and yards until there is sufficient vegetation to cover it.	Section III.3
Perry L Brown	45	Air Quality	b	What is going to be the contaminate levels to the area taking into consideration wind directions, and velocities, that would carry these contaminants.	Section III.3
Kathy Moore	47	Air Quality	b	The issue is how DEQ intends to protect residents from a new and substantial source of potentially contaminated dust.	Section III.3

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
East Helena Lead Education and Abatement Program / Jan Williams	65	Air Quality	b	The LEAP would like to see the proposed dust program before a permit is granted as we feel that being in a Superfund site, the risks posed are greater than in other areas.	Section III.3
Pamela Bucy	74	Air Quality	b	Potential for stirring up contaminated dust.	Section III.3
Brian Connolly	79	Air Quality	b	Air contamination with dust from previously contaminated soils that will be constantly mined and disturbed.	Section III.3
Steven Goodrich	98	Air Quality	b	HS&G plans not only to create additional dust, but to truck those toxic chemicals all over the valley.	Section III.3
Mark Scherer	101	Air Quality	b	Concerned about air pollution stirring up from existing contaminated soil.	Section III.3
Mark Scherer	101	Air Quality	b	Concerned about soil contamination landing on my property where my grandchildren play.	Section III.3
Mike Sedlock	105	Air Quality	b	Airborne particles contain contaminated material that is harmful to children who are in the direct path of the prevailing winds.	Section III.3
Jim and Michelle Schweyen	115	Air Quality	b	Disturbed soil will be blowing around and subject our kids to more concentrated soil contaminants.	Section III.3
Marie Connolly	121	Air Quality	b	Moving contaminated soils 24 hours a day around schools and homes.	Section III.3
Brenda Thomas	126	Air Quality	b	Toxic dust will be disturbed and blow into out yards.	Section III.3
Viola Zindell	146	Air Quality	b	Air pollution and the fact that the operation would disturb the soil contaminated by the smelter. What effect is this going to have on the environment?	Section III.3
David Schnittgen	148	Air Quality	b	A large volume of the top soil will be moved, dust potentially lead bearing will be raised by the equipment. Dust will blow off the berms until the proposed watering commences.	Section III.3
Debra McLarnon	4	Air Quality	c	By first moving the topsoil to a berm allows the wind to blow the topsoil by neighboring homes where many children may reside.	Section III.3
Kathy Burlinson	6	Air Quality	c	Blowing dust will increase. The dust will also make its way into my home.	Section III.3
Eastgate Village Water & Sewer Association, Inc./Paul Johnson	10	Air Quality	c	The proposed gravel pit could limit the effectiveness of the solar operation due to dust blocking direct access to sunlight (thus inhibiting the effectiveness of the collectors.)	Section III.3
Le Ann Ferron	12	Air Quality	c	Fugitive dust will be another daily reality. This dust will not just be a nuisance, but could have negative health impacts as well.	Section III.3
Ryan Williams	14	Air Quality	c	Concerns about the dust.	Section III.3
Tina Shorten	16	Air Quality	c	This operation will be stirring up dust 24 hours a day.	Section III.3
Carla Sturn	17	Air Quality	c	Dust from the gravel pits is awful.	Section III.3
Abigail Hulme	56	Air Quality	c	Much more of a thorough review of the weather patterns and the type of dust that is generated by the sand and gravel operations.	Section III.3
Tim and Leslie Brandt	71	Air Quality	c	Concerned with the constant wind blowing and dust problem. I cannot believe HS&G will have water trucks working the pit 24-7 to prevent this pollution.	Section III.3

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
Eastgate II Homeowners Assoc./Alex Ostberg	77	Air Quality	c	If you look at their current site they have problems with blown dust and sediment.	Section III.3
Bob Burke	97	Air Quality	c	When the temperature drops below freezing how is water going to be used to control dust? HSG stated at a public meeting that they were not going to use chemicals.	Section III.3
Jared and Heather Lay	108	Air Quality	c	There is no possible way to keep dust down with the size of operation proposed.	Section III.3
Samuel Osborne	119	Air Quality	c	Silica even if the silica dust levels are adequate for a worker in a 8 hour day, I will be in the dust for 24 hours a day	Section III.3
Steve Lindberg	128	Air Quality	c	The company can't control the dust on this large of a site.	Section III.3
Julie Banschbach	134	Air Quality	c	I am worried about the dust.	Section III.3
David Von Bergen	135	Air Quality	c	Putting dust in to the wind all night and day.	Section III.3
David Schnittgen	148	Air Quality	c	Proposed berm will be hard to keep damp, with the hot dry, windy summers we have, it seems to be very unlikely they will be able to control the dust all the time.	Section III.3
Debra McLarnon	4	Air Quality	d	There will be increased dust, smoke, and dirt. Will there be harmful substances? This should not be so close to so many residential areas.	Section III.3
Kathy Burlinson	6	Air Quality	d	I get migraine headaches from diesel fumes and don't feel I should have to move from my home.	Section III.3
James & Candace Wilbur	9	Air Quality	d	There will be a considerable amount of truck traffic at the site which will increase the air pollutants.	Section III.3
James & Candace Wilbur	9	Air Quality	d	EA has not addressed the issue of pollutant emissions from idling diesel engines and the large numbers of vehicle traffic generated by this facility.	Section III.3
Kim Kuderna	15	Air Quality	d	Data could have been presented regarding dust and smoke levels.	Section III.3
Holly Mook	30	Air Quality	d	Burning oil puts off pollution that can cause health effects to people of all ages.	Section III.3
Kathy Moore	47	Air Quality	d	EA did not address the issue of carbon monoxide and idling diesel engines, and the impact on residents.	Section III.3
James & Candace Wilbur	9	Air Quality	e	Modeling of emissions during the winter months is of small comfort with the poor air quality these days that are experienced in the Helena Valley during our frequent weather inversions. If monitoring is to be required as the only reliable measure the parameters and methodology of that monitoring plan should be explained in the MEPA document.	Section III.3
Dave Swanson	84	Air Quality	e	Will HS&G be required to run baseline as well as on-going, real time air monitoring for the duration of the project and provide monthly results to the public? What will be required and enforced for dust abatement measures?	Section III.3
Shelley Jucan	144	Air Quality	e	Recommend that some type of monitoring system to be required to document air levels.	Section III.3
David Schnittgen	148	Air Quality	e	Should have constant monitoring, and be held to the most stringent air pollution standards.	Section III.3

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
James & Candace Wilbur	9	Air Quality	f	DEQ must review and analyze this information and discuss how these heavy metals could affect the health of residents that will be exposed to dust.	Section III.3
Vicki Hewitt	25	Air Quality	f	People with asthma will suffer more.	Section III.3
Sue O'Loughlin	43	Air Quality	f	I have chronic respiratory problems and having a gravel pit churning up more dust will just make it worse.	Section III.3
Kevin Kauska	46	Air Quality	f	Not only will dust become an issue, HS&G will be creating dust from soil and rocks which are contaminated from the ASARCO supersite. The lead levels are extremely high and dangerous to people. HS&G would be putting this in the air for everyone to breathe. I would like to know what the health impacts will be and who is paying for the medical bills due to this? Who did the health studies and can those be provided to residents for review?	Section III.3
Kathy Moore	47	Air Quality	f	Residents will see increased dust and decreased air quality and will insure poorer health.	Section III.3
Det Meskimen	48	Air Quality	f	Dust will also be an irritation.	Section III.3
Bob Burke	97	Air Quality	f	Increased dust this is going to have a very negative effect on our health.	Section III.3
Mike Renney	103	Air Quality	f	Health concerns of our family from the dust stirred up by the mining and the emissions from HS&G.	Section III.3
James & Candace Wilbur	9	Air Quality	g	The Cumulative Impacts statement in the air quality section discusses historic use of machinery, that have contributed to area dust conditions, however, no active agricultural activities have occurred on this site in at least the last twenty years.	Section III.3
Paul O'Loughlin	19	Economics	a	Will the permit include posting a reclamation bond?	Section III.21
Dave Swanson	84	Economics	a	What is the reclamation bond for this project? How many jobs will this project create?	Section III.21
Victor and Jonett Berg	96	Economics	b	Who will pay for the needed improvements to the infrastructure? Will our property taxes be raised to pay for improvements while our property values decline?	Section III.21
David Von Bergen	135	Economics	b	Dropping the value of my property but higher taxes.	Section III.21
Holly Mook	30	Economics	c	HS&G made it clear that they don't have to help maintain the roads as it is a County duty. Therefore they get to lower our property values while raising our taxes. They should have to pay impact fees to cover expenses that they cause.	Section III.21
Ona Lepard	31	Economics	c	Who will bear the expense of new roads?	Section III.21
Kathy Moore	47	Economics	c	If HS&G elects to increase the usage of these poorly constructed intersections and increase danger to ped/cyclists & school children then they should be required to improve these intersections to mitigate the impacts of its increased heavy truck traffic.	Section III.21
David Schnittgen	148	Economics	c	Due to government services needing to fix things like the roads, residents' taxes will go up	Section III.21
Phil Porrini	73	Economics		The Helena area needs these natural resources for roads, buildings, airports, landscaping and a multitude of other economic reasons.	Thank you for your comment

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
Dan Edens	80	Economics		With the ever rising cost of energy it needs to be located as close to town as possible. Moving the pit to a remote location will make building material costs rise unnecessarily. Forcing the permit application to undergo further environmental review also causes the operating costs to rise excessively.	Thank you for your comment
Debra McLarnon	4	Health & Safety	a	If surveillance cameras are being used then how often will the tapes be viewed? Will the tapes only be looked at if a child goes missing?	Section III.11
David Schnittgen	148	Health & Safety	c	Concerned about the "bowl" reclamation. This bowl will collect runoff water which will then set in the bowl and stagnate. This stagnate pond will be a breeding ground for mosquitoes. Concerned with this during the operation of the plant as the settling ponds have the potential to be breeding mosquitoes.	Section III.11
Shelley Jucan	144	Health & Safety	d	Are there any studies to show any correlation between placement of industrial activities in residential area and the increase of crime?	Section III.11
Brian and Julie Loaas	114	Health & Safety	e	HS&G were quick to state that they would not be driving the big trucks by the elementary schools, there is future work to be done on Canyon Ferry Rd. no one will be using that road, and they will be driving by the school.	Section III.11
John and Joyce Yager	125	Health & Safety	e	Concerns for safety for the children and residents in the surrounding area.	Section III.11
Steve Lindberg	128	Health & Safety	e	Concern for trucks passing a school area.	Section III.11
Debra McLarnon	4	Health & Safety	a	If a child decides to go investigate the pit how is HS&G going to help protect the child from getting injured?	Section III.11
Debra McLarnon	4	Health & Safety	a	The possibility of children investigating at HS&G's present pit is low because if the small amount of homes in the area. The possibility of children investigating at the new site is significantly higher solely on the amount of homes in the area.	Section III.11
East Helena Public Schools/ Ron Whitmoyer	18	Health & Safety	a	Barriers need to be constructed that would prevent students from entering the worksite.	Section III.11
Ona Lepard	31	Health & Safety	a	HS&G made promises like security fences. Who will police their promises? What happens when they exceed their budget?	Section III.11
Charles & Carol Aumell	20	Health & Safety	b	Pollutants, noise, dust, water, lighting, road and bridge use, will be damaging.	Section III.11
Joseph Nye	26	Health & Safety	b	During the public meeting a man brought up his family's breathing issues and what impacts this might have on them. DEQ or HS&G need to take a closer look at this family's health conditions and require HS&G to either provide relocation for these individuals or minimize air quality impacts to levels which his family can live healthy. DEQ makes special steps to avoid harm to animals; shouldn't families' health concerns be important?	Section III.11
Joseph Nye	26	Health & Safety	d	Are there any studies that show any correlation between placement of industrial activities in residential areas and the surrounding crime rates?	Section III.11
Kim Kuderna	15	Health &	e	Routing of truck traffic past Eastgate Elementary	Section III.11

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
		Safety		School would be disastrous.	
East Helena Public Schools/ Ron Whitmoyer	18	Health & Safety	e	Heavy trucks passing in front of the school are unsafe.	Section III.11
East Helena Public Schools/ Ron Whitmoyer	18	Health & Safety	e	Financial impact to school due to managing traffic safety.	Section III.11
Charles & Carol Aumell	20	Health & Safety	e	The children at Eastgate Elementary School are in danger of heavy trucks.	Section III.11
Jim and Michelle Schweyen	115	Health & Safety	a	Safety of our children, getting too close to the gravel pit?	Section III.11
Shelley Jucan	144	Health and Safety	f	HS&G proposed that they would bring cold millings into the site to be used for recycled pavements. The EA fails to disclose how this material will be stored. Are these cold milling hazardous materials? If so does HS&G meet current storage techniques; meet requirements?	Section III.11
James & Candace Wilbur	9	Hours of Operation	a	The proposal for this facility to operate 24-hours a day in a residential area is unacceptable. DEQ has statutory authority to mitigate noise, dust and visual impacts with limitations on hour of operations. It is never stated in this EA that DEQ proposes to exercise that authority with this proposal to mitigate the very apparent impacts.	Section III.8
Kathy Moore	47	Hours of Operation	a	Operation after 7 pm and until 7 am will be disruptive, stressful and will destroy the residential character of the entire area.	Section III.8
Kathy Moore	47	Hours of Operation	a	According to 17.24.218(1)(d) of the Administrative Rule of Montana, it appears that one of the only real authorities DEQ has with respect to open cut mining is to limit the hours of operation to reduce adverse impacts on residential areas.	Section III.8
William and Lisa Durbin	51	Hours of Operation	a	Prolonged exposure to noise during the nighttime hours. We request that nighttime hours be restricted for crushing operations. Operations at a minimum should be suspended from 10 pm to 6 am.	Section III.8
Abigail Hulme	56	Hours of Operation	a	DEQ has the authority to limit the hours of operation, which would diminish the impact of noise, dust, and traffic. Request a more thorough study be conducted on the potential impact of this operation and that hours of operation be limited to minimize the impact of this operation on local residents.	Section III.8
Jim Skinner	64	Hours of Operation	a	The EA recommends limited hours of operation in a number of sections as a potential mitigation for anticipated impacts from the operation of this pit. It does not indicate how the hours will be limited or the extent to which limiting hours will reduce the expected impacts.	Section III.8

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
Jim Skinner	64	Hours of Operation	a	As limiting the hours of operation for this type of facility in such close proximity to schools may lessen the significance of anticipated impacts associated with the proposed DEQ action; the EA should be revised to include a much more comprehensive assessment and analysis of impact mitigation that would be provided by limiting the hours of operation to a reasonable level-similar to the hours that the majority of the residential community works.	Section III.8
Maxine Mougeot	69	Hours of Operation	a	Do you know what a scraper sounds like at 1 in the morning when it is filling up to go back to the rock crusher - then to hear the rock crusher all night - yes with the berm - it is awful.	Section III.8
Brian Connolly	79	Hours of Operation	a	Hours of operation are a concern.	Section III.8
Bill Haslip	81	Hours of Operation	a	I believe the noise issue is unacceptable at either site for the duration HS&G has applied for. 7 am to 8 or 9 pm would be much more respectful of their neighbors.	Section III.8
Bob Burke	97	Hours of Operation	a	Hours of operation are not reasonable. Noise at night will have a very negative effect on families.	Section III.8
Mike Sedlock	105	Hours of Operation	a	The hours of operation should be limited to no more than 7 am to 6 pm Monday through Friday and not allowed to operate on holidays.	Section III.8
Jared and Heather Lay	108	Hours of Operation	a	The proposed site is to run all night long in a complete residential area surrounded on all sides by occupied homes.	Section III.8
Miles and Rita Watson	117	Hours of Operation	a	Why would they not have noise restrictions where they could not conduct any noisy operation between 7 pm and 7 am each day?	Section III.8
Marie Connolly	121	Hours of Operation	a	Noise pollution would be intolerable at night.	Section III.8
Cliff Neiffer	59	Hours of Operation	a	We will not be able to sit outside or sleep with our windows open at night because they will be working.	Section III.8
Mike Renney	103	Hours of Operation	a	Lights and noise will become a problem for those who are trying to sleep.	Section III.8
Shelley Jucan	144	Hours of Operation	a	Has DEQ investigated the impacts that a 24-hour gravel pit have on the surrounding area?	Section III.8
Shelley Jucan	144	Hours of Operation	a	HS&G could limit their operations to be 8 am to 5 pm.	Section III.8
David Schnittgen	148	Hours of Operation	a	The night noise will disturb all residents.	Section III.8
David Von Bergen	135	Hours of Operation	a	Worried about the noise of the crushers running all night long making it hard to sleep	Section III.8
Tina Shorten	16	Hours of Operation	a	This business will be running for 24 hours a day, this will interfere with everyday life.	Section III.8
Paul O'Loughlin	19	Hours of Operation	a	Reasonable hours of operation in a residential area does not equate with a 24-hour per day operation.	Section III.8
Merrilee Coleman	23	Hours of Operation	a	Noise and light 24 hours a day are not acceptable.	Section III.8
Joseph Nye	26	Hours of Operation	a	EA has proposed crushing operations planned for hours that are in total violation of the agreements between existing neighbors. HS&G could limit crusher's hours of operation to 8 am to 8 pm.	Section III.8
LaCasa Grande Subdivision/	28	Hours of Operation	a	Unit barriers have been constructed to reduce noise and light pollution, the hours should be restricted to	Section III.8

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
Sue Leferink				daytime.	
Holly Mook	30	Hours of Operation	a	Hours should be restricted to daytime operation only.	Section III.8
Paul Williams	33	Hours of Operation	a	Trucks should only be allowed to operate between the hours of 6 am and 10 pm.	Section III.8
Paul Williams	33	Hours of Operation	a	Gravel trucks should be restricted from traveling north or south on Lake Helena Dr. during school hours or on school days.	Section III.8
Nancy B.	22	Hours of Operation	a	Noise and lights from these operations could trigger sleep deprivation.	Section III.8
Vicki Hewitt	25	Hours of Operation	a	Noise during the night will interrupt our sleep.	Section III.8
Ona Lepard	31	Hours of Operation	a	Lights at night, noise during operating hours will make it hard for families to sleep.	Section III.8
Joseph Nye	26	Hours of Operation	a	Potential health as well as professional performance issues may arise should there be sleep loss.	Section III.8
Joseph Nye	26	Land Use	a	Determine what exactly the proposed gravel pit at this location will have on Urban Sprawl.	Outside the Scope of this EA
Joseph Nye	26	Land Use	a	A current zoning board is working on getting Lewis & Clark County out of interim zoning and into a full fledged zoning plan. The current plan has the proposed zoning for the area in question identified as a "community center".	Section III.12
William and Lisa Durbin	51	Land Use	a	The zoning meeting that was scheduled in Jan. was postponed until Feb. to provide additional notice to the public. We ask that this permit not be even considered for approval until after that meeting.	Section III.12
Christopher Jones	55	Land Use	a	Lewis & Clark County is in the process of zoning the Helena Valley. The area is slated to be zoned as a residential / community center area.	Section III.12
Angela Jones	123	Land Use	a	Lewis & Clark County is currently in the process of zoning the Helena valley. The area in question is slated to be zoned as a residential/community center.	Section III.12
Shelley Jucan	144	Land Use	a	Current zoning board is working towards getting Lewis & Clark County out of interim zoning and into a full fledged zoning plan. The area in question was proposed as a "community center".	Section III.12
Grandview HOA/Michael Sedlock and Clifford Smith	44	Land Use	b	This is almost all residential with no commercial business development that would have the significant impact that the HS&G operations would impose.	Section III.12
Wade and Linsey Feller	67	Land Use	b	I believe that major residential areas and close to schools is not the appropriate place for a major operation as the proposed one.	Section III.12
Tracy Mabry	70	Land Use	b	I believe that the area is completely inappropriate for citing an enterprise of this type. To allow a gravel pit with 24-hour noise and lights from the crushing and smell from the batch plants should not be allowed.	Section III.12
Eastgate II Homeowners Assoc./ Alex Ostberg	77	Land Use	b	Too much industrial growth in an area is just as bad as too much residential.	Section III.12
Mike Mergenthaler	113	Land Use	b	Sand and gravel pits have no place in a residential area.	Section III.12

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
Keith Foster	89	Land Use	b	Their original site location did not raise all this concern because its location is not near as many home owners as their new proposal site. Consider making them go back to their original location.	Section III.12
Victor Heinitz	139	Land Use	b	Is there any regulation that covers the establishment of any gravel pit operation as to the number of this type of facility within a specified area?	Section II.7
Kathy Moore	47	Land Use	c	A weakness of this EA is that it bases the impacts of this operation on land use and land activities from many years ago, rather than on current conditions.	Section III.12
James & Candace Wilbur	9	Land Use	c	As stated several times previously in the EA the current land use of this site is pasture land. It is not "fallow" as stated in this section.	Section III.12
Bill Haslip	81	Land Use	c	The 111 acre tract currently being reviewed has had no use as long as my memory serves.	Section III.12
David Schnittgen	148	Land Use	c	I have lived in Eastgate area for 4 years and have never seen any agricultural equipment working the site of the proposed gravel pit.	Section III.12
Jesse Aber	107	Land Use	e	Contributes the first quality open space leaving the cluttered areas to the southwest and west as one heads east.	Section III.12
James & Candace Wilbur	9	Lifestyle		Given that this area is essentially a residential community, the operation of this proposed industrial facility will disrupt the normal community lifestyle.	Section III.19
Natalia Rogers	8	MEPA Doc.	a	There is a precedent in Lewis & Clark County for completing an Environmental Impact Study.	Section II.7
Andrew Quist	57	MEPA Doc.	a	Look at the level of research and EIS that occurred for the dump/transfer station a few years back. Why isn't that the same level of research being performed here?	Section II.7
Jim Skinner	64	MEPA Doc.	a	I do not believe the appropriate environmental process and coordination required for this state action has been performed.	Section II.7
Mike Sedlock	105	MEPA Doc.	a	Factual information is necessary, more public meetings need to be held with updated information and additional time allowed for public comments, that an Environmental Impact Statement is necessary and justified.	Section II.7
Thomas A Mendyke	109	MEPA Doc.	a	The land in question is a superfund site. For that reason, any major disturbance of the soil and the already known heavy metals/contaminants contained in the soil cannot be fully analyzed without an EIS.	Section II.7
Gregory van Horssen	120	MEPA Doc.	a	Montana statute requires, a full EIS on this proposal as opposed to the Environmental Assessment currently under consideration.	Section II.7
Angela Jones	123	MEPA Doc.	a	I believe an EIS should be performed.	Section II.7
Lewis & Clark county Board of County Commissioners / Ed Tinsley	129	MEPA Doc.	a	The BOCC believes that the size and complexity of this project warrants an EIS due to traffic issues, the residential nature of this site, and its location within the Superfund Site.	Section II.7
Great West Engineering / Bob Church	2	MEPA Doc.	b	I believe that either a more detailed EA or/and an EIS should be completed before it is permitted by the DEQ	Section II.7
Debra McLarnon	4	MEPA Doc.	b	Errors and discrepancies were made in the proposed plan, could a supplemental draft be made every time a	Section II.7

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
				change happens?	
Debra McLarnon	4	MEPA Doc.	b	Also when corrections are made, how soon after would the public be able to see the changes?	Section II.7
Natalia Rogers	8	MEPA Doc.	b	I would like to request a new EA that is correct and complete.	Section II.7
James & Candace Wilbur	9	MEPA Doc.	b	A more complete analysis with an appropriate review by the affected members of the public as required by MEPA needs to be completed.	Section II.7
Eastgate Village Water & Sewer Association, Inc./Paul Johnson	10	MEPA Doc.	b	We need a more thorough, in-depth environmental review. A checklist EA is simply not adequate.	Section II.7
Mike & Jean Riley	11	MEPA Doc.	b	With the number of sections that either have misinformation or wrong information, the public must have another opportunity to review any environmental document that DEQ prepares.	Section II.7
Glenna Kendall	35	MEPA Doc.	b	Update the EA on this issue so that it is correct and complete.	Section II.7
Steven Goodrich	42	MEPA Doc.	b	One would expect that there would be an opportunity for public input before something like this was finalized. I believe there was no opportunity because no public comment was wanted.	Section II.7
Kevin Kauska	46	MEPA Doc.	b	This plan has not been published well enough so the residential communities surrounding this area have an opportunity to read the assessment and ask questions or provide comments.	Section II.7
William and Lisa Durbin	51	MEPA Doc.	b	EA be corrected and re-issued for comment.	Section II.7
Andrew Quist	57	MEPA Doc.	b	Current environmental assessment for this project contains several errors and omissions and should be thrown out.	Section II.7
Larry E Renney	60	MEPA Doc.	b	HS&G needs to provide a new EA that is correct and complete	Section II.7
Jim Skinner	64	MEPA Doc.	b	DEQ must fully evaluate all of these impacts associated with the opencut State action in this document.	Section II.7
Jim Skinner	64	MEPA Doc.	b	The scope and nature of the proposed action, as presented in the EA, is vastly understated as compared to the plan proposed by HS&G during the DEC 18th meeting.	Section II.7
Eastgate II Homeowners Assoc./ Alex Ostberg	77	MEPA Doc.	b	We would like to request that a correct and complete assessment be performed.	Section II.7
Jolie Kolberg	90	MEPA Doc.	b	Demanding that the EA perform a correct and complete analysis on the land that is proposed to be the future home of HS&G.	Section II.7
Bradley Kolberg	91	MEPA Doc.	b	Urging that the EA conduct a correct and complete study of the proposed site off of Lake Helena Dr.	Section II.7
Jeffrey Tamblyn	93	MEPA Doc.	b	Requesting a correct and complete assessment of this site.	Section II.7

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
Bob Burke	97	MEPA Doc.	b	EA lacks information, contains errors and does not disclose HS&G larger scale plans pit, which would have required notification of neighboring residents within 1000'; because of this the DEQ should void the EA.	Section II.7
Samuel Osborne	119	MEPA Doc.	b	New statement with correct information should be used to make our decision.	Section II.7
John and Megan Surginer	127	MEPA Doc.	b	A new EA be put out that is correct and complete with a long enough comment period.	Section II.7
Steve Lindberg	128	MEPA Doc.	b	It is not enough to say it is a draft rather than a final document, as it is more like an early draft or an outline that has yet to have the necessary data in place.	Section II.7
Nicole Roberts	138	MEPA Doc.	b	Need a more complete and updated version of the EA to determine my opinion.	Section II.7
Shelley Jucan	144	MEPA Doc.	b	Like to see the EA rewritten to fully document HS&G's full plan and clearly identify what the expansion of this operation will be and what future permits will be required, and what impacts will need to be mitigated.	Section II.7
Jill O'Connor	147	MEPA Doc.	b	A corrected EA should be done and placed for additional public comment.	Section II.7
Great West Engineering / Bob Church	2	MEPA Doc.	c	Draft EA does not provide adequate information.	Section II.7
Great West Engineering / Bob Church	2	MEPA Doc.	c	There is a significant level of additional work that needs to be completed.	Section II.7
Natalia Rogers	8	MEPA Doc.	c	The EA states in multiple locations what will be done "as required" with no definitions of "required". Noise, dust, vegetation replacement, and maintenance; all of these issues need specific levels and numbers attached to them before continuing the process.	Section II.7
Natalia Rogers	8	MEPA Doc.	c	The EA has no defined levels for implementation of precautions or monitoring. Acceptable levels of noise and dust have not been established by this EA.	Section II.7
James & Candace Wilbur	9	MEPA Doc.	c	Document fails to adequately comply with the DEQ's responsibility to meet the MEPA requirements for this proposed state action. The draft EA has significant errors and omissions of data and analysis.	Section II.7
Lewis & Clark County Water Quality Protection District	39	MEPA Doc.	c	This environmental impact analysis is incomplete, and lacks the necessary analysis to satisfy the DEQ's MEPA requirements.	Section II.7
Lewis & Clark County Board of Commissioners	40	MEPA Doc.	c	The EA that we received is not identical to the information now posted on the DEQ website. There are errors in some portions of the EA. Do not want the decisions to be made based on misprints or typos, and we feel that this proposed project warrants a more careful analysis.	Section II.7
Kathy Moore	47	MEPA Doc.	c	DEQ must review and analyze this information and discuss how these heavy metals could affect the health of residents.	Section II.7
Abigail Hulme	56	MEPA Doc.	c	Based on the information that I have received I do not believe there is enough information, or baseline data, to effectively evaluate the impact of the pit on nearby residents and the local environment.	Section II.7

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
Abigail Hulme	56	MEPA Doc.	c	Neither the impact based on acreage of use nor hours of operation are correctly identified in the current EA.	Section II.7
Steve and Melissa Schaeffer	68	MEPA Doc.	c	I demand that you report everything fairly, with correct information.	Section II.7
Eastgate II Homeowners Assoc./ Alex Ostberg	77	MEPA Doc.	c	The thought is that there are too many unanswered questions regarding the proposed site to formulate an educated opinion on the impact this operation would have on the surrounding community.	Section II.7
Damon Peterson	82	MEPA Doc.	c	There are too many unanswered questions regarding the site to formulate an educated opinion on the impact this operation would have on the surrounding community. These need to be extensive studies regarding water, soil and contamination, dust, noise, and traffic.	Section II.7
Tina Peterson	92	MEPA Doc.	c	Too many unanswered questions regarding the site to formulate an educated opinion on the impact this operation would have on the surrounding community.	Section II.7
Loren Rogers	94	MEPA Doc.	c	Draft is not even close to complete and lacks the truth of the environmental impact it will have on residents and wildlife.	Section II.7
Steven Goodrich	98	MEPA Doc.	c	The public has been asked for input but not given the facts.	Section II.7
Miles and Rita Watson	117	MEPA Doc.	c	Not enough evaluation on the impact on existing residential areas or the concept would not have gotten this far without being denied.	Section II.7
Gregory van Horssen	120	MEPA Doc.	c	Incorrect and inadequate information has been given to the Department. This erroneous/insufficient information will be an improper basis upon which the Department makes its permitting decision.	Section II.7
John and Joyce Yager	125	MEPA Doc.	c	Due to the lack of information and errors in the existing EA the residents cannot make an informed decision.	Section II.7
Lewis & Clark county Board of County Commissioners / Ed Tinsley	129	MEPA Doc.	c	Concern that EA completed by your department appears to be incomplete and inaccurate. We do not believe the EA provides sufficient information to make an informed decision.	Section II.7
Jennifer Nye	130	MEPA Doc.	c	There are many things that are incorrect and vague in this EA.	Section II.7
Mark Byers	132	MEPA Doc.	c	Hope you postpone this until more fact and info are available.	Section II.7
Dave Luckey	140	MEPA Doc.	c	EA must address all issues and should be backed with accurate information.	Section II.7
J. Wade Kurns	141	MEPA Doc.	c	There is not enough information on the subject.	Section II.7
Sarah Herold	142	MEPA Doc.	c	There is not enough information as how HS&G will protect our soil, air, water and traffic safety levels.	Section II.7
Natalia Rogers	8	MEPA Doc.	c	There was no baseline data provided in the EA.	Section II.7
Natalia Rogers	8	MEPA Doc.	c	The EA does not provide substantive data to back HS&G's claim of little to no impact.	Section II.7
James & Candace Wilbur	9	MEPA Doc.	c	EA lacks the necessary baseline data and the HS&G has proposed significant modifications to the proposal that have not been considered in this document's determination of significance.	Section II.7

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
James & Candace Wilbur	9	MEPA Doc.	c	A higher level MEPA review document would potentially consider more alternatives than no action and permitting this facility. The Agency-Modified Alternatives requires data collection activities that should have been completed prior to acceptance of the HS&G application and the production of this EA. Requiring these activities after permitting is not compliant with MEPA or the Open cut Mining statutes.	Section II.7
Mike & Jean Riley	11	MEPA Doc.	c	The EA states that monitoring will be completed to determine the impacts to the water table. This is in direct violation to 17.24.217©. At the meeting, DEQ did not commit to completing the necessary studies, again. DEQ is in direct violation of the rules.	Section II.7
Mike & Jean Riley	11	MEPA Doc.	c	DEQ did not follow the MEPA model rules for determining the significance of the impacts. Without background levels, the impacts of the proposed action cannot be determined.	Section II.7
Mike & Jean Riley	11	MEPA Doc.	c	MEPA states: " the level of analysis in an EA will vary with the complexity and seriousness of environmental issues associated with a proposal action. The level of public interest will also vary. The agency is responsible for adjusting public review to match these factors." DEQ did not follow this section. This area is in a complex environmental site, and EPA superfund area. They did not adjust to the level of public interest. It would appear that the DEQ did not consider public interest when first putting out the EA for comment. It appears the DEQ did not want the public to know about the impact.	Section II.7
Grandview HOA/Michael Sedlock and Clifford Smith	44	MEPA Doc.	c	Additional data collection and analysis are warranted.	Section II.7
Andrew Quist	57	MEPA Doc.	c	There needs to be extensive studies regarding to water, soil and contamination, dust, noise and traffic.	Section II.7
Bruce Desonia	61	MEPA Doc.	c	The process did not seem to have proper notification to homeowners potentially affected by this proposal.	Section II.7
Amy and Scott Thiel	66	MEPA Doc.	c	The public was improperly informed by the DEQ and then only allowed two weeks for extended comment on an issue with legal ramifications, goes to show just one of the many failings of DEQ in this process.	Section II.7
Phil Porrini	73	MEPA Doc.	c	The current HS&G operation can provide data for the proposed site.	Section II.7
Victor and Jonett Berg	96	MEPA Doc.	c	Concerned that we were not notified that HS&G was applying for a permit to start operations in our neighborhood.	Section II.7
Charlotte M. Jones	110	MEPA Doc.	c	There does not appear to be enough baseline data to formulate a clear assessment.	Section II.7
Samuel Osborne	119	MEPA Doc.	c	There is no baseline data to be compared to.	Section II.7
Carrie Lindberg	124	MEPA Doc.	c	Further studies are needed because the EA leaves huge gaps in the data related to issues of noise, dust, traffic, impact of our water, and the community safety.	Section II.7

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
Great West Engineering / Bob Church	2	MEPA Doc.	d	The DEQ maintains that since no property owners are within 1,000 feet of the actual pit that notification was not required. I disagree because the scale and dispatch office are part of the operation and within 1,000 feet of Eastgate's property.	Section II.7
James & Candace Wilbur	9	MEPA Doc.	d	No notification of adjacent residents or landowners has been made by your agency.	Section II.7
Eastgate Village Water & Sewer Association, Inc./Paul Johnson	10	MEPA Doc.	d	The bottom line is that notification should have been given to adjacent landowners, especially considering that this is a MEPA governed permitting process.	Section II.7
Eastgate Village Water & Sewer Association, Inc./Paul Johnson	10	MEPA Doc.	d	DEQ did not adequately inform the public (especially the landowners).	Section II.7
William B. Covey	49	MEPA Doc.	d	Expected a more open "public notice" early in the process so the public could have at the very least, be heard.	Section II.7
Rune Storm	50	MEPA Doc.	d	I urge you to allow the public to voice their concern in a well publicized Public Hearing prior to approving this plan.	Section II.7
William Sullivan	100	MEPA Doc.	d	Wish to ask that the public comment period for the proposed plan be extended.	Section II.7
Shelley Jucan	144	MEPA Doc.	d	Proper notice was inadequate or non-existent to adjacent landowners.	Section II.7
David Schnittgen	148	MEPA Doc.	d	The signs have been up at the Foster location for many years, stating it is the future home of HS&G. there have been no signs warning the land owners near the proposed Lake Helena -Valley Dr location.	Section II.7
David Schnittgen	148	MEPA Doc.	d	The MDT should have been contacted as the proposed location would impact two intersections with Canyon Ferry Rd.	Section II.7
David Schnittgen	148	MEPA Doc.	d	None of the individuals who lived in the immediate area were contacted, and they would be the most impacted by this proposed pit.	Section II.7
David Schnittgen	148	MEPA Doc.	d	Eastgate Homeowners Assoc. should have been contacted, as the Eastgate Sewage lagoons are located across Lake Helena Dr. from the proposed gravel pit.	Section II.7
Great West Engineering / Bob Church	2	MEPA Doc.	e	Improvements or mitigation identified in the more detailed EA should then be included as conditions of HS&G's permit.	Section II.7
Eastgate Village Water & Sewer Association, Inc./Paul Johnson	10	MEPA Doc.	e	They are giving us spotty information about the location of the berms and their proposed treatment methods.	Section II.7
Paul O'Loughlin	19	MEPA Doc.	e	The EA mentions certain requirements "as needed" or "as determined necessary". Who would make those decisions and under what circumstances is unclear?	Section II.7
Nancy B.	22	MEPA Doc.	e	Found many of statements made by HS&G to be misleading.	Section II.7
Anita Lincoln	99	MEPA Doc.	e	HS&G tells us what they are planning, yet in the next statement, they'll reinforce that a permit doesn't even require the extra paving and noise limits that they intend to use. How many other things are not being disclosed at this time?	Section II.7

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
Anita Lincoln	99	MEPA Doc.	e	Is it easier to get a secondary permit once they got the first one?	Section II.7
Shelley Jucan	144	MEPA Doc.	e	EA states that berms and vegetation will be placed as necessary, but nowhere does it state what will define "necessary". Residents need to be made aware of the process that is needed if they feel a berm needs to be created.	Section II.7
Joseph Nye	26	MEPA Doc.	e	EA states that berms and vegetation will be placed as necessary, but nowhere does it state what will define "necessary"	Section II.7
James & Candace Wilbur	9	MEPA Doc.	f	HS&G intends to mine not just the 111.5 - acre proposed pit area, but the entire area of the 400+ acre property including the designated 1,000 foot property line setback area. This admission of intent negates any mitigation of the proposed action by the statement of proposing a setback area for area residences made in the current application and EA.	Section II.7
James & Candace Wilbur	9	MEPA Doc.	f	Also, the mining of an additional 300 acres must be considered in either this proposed action or at the very least a cumulative impact for the MEPA environmental analysis.	Section II.7
James & Candace Wilbur	9	MEPA Doc.	f	The cumulative Impacts section states that this development, if approved, would lead to the addition of 133 lots with the information attributed to "Burke per. Comm. 2007" The list of reference (#27) at the end of the EA has no entry indicating who "Burke" is or the source of this information, another omission of data.	Section II.7
James & Candace Wilbur	9	MEPA Doc.	f	There are other future developments that are not considered in this document. One is the Garber Ranch subdivision that has requested approvals from the DEQ Community Services Bureau for water well locations and DEQ has issued a PWS-6 Report for this development that proposes to have about 3,000 homes on this adjacent property to the Red Fox Meadows site.	Section II.7
James & Candace Wilbur	9	MEPA Doc.	f	DEQ has in this document understated and minimized numerous reasonable foreseeable impacts and ignored future developments in the cumulative impacts analysis. Several areas of this document indicate impact levels of severity, duration, geographic extent and frequency of occurrence that would meet the definition of a significant impact.	Section II.7
Eastgate Village Water & Sewer Association, Inc./Paul Johnson	10	MEPA Doc.	f	A map was provided that clearly showed a scale, dispatch office and parking facility within 1,000 feet of the Eastgate Water & Sewer property to the west. Additionally, HS&G officials confirmed that they planned to eventually expand the mining operation outward (thus encroaching within 1,000 feet of the majority of their neighbors.	Section II.7
Mike & Jean Riley	11	MEPA Doc.	f	HS&G stated they are planning to mine the entire site; additional information must be developed for wells and properties within 1,000 feet of the proposed main permit. This will include residences within the Wildfire, Canal Circle, Casa Grande, and Eastgate, just to mention a few. How does the DEQ plan to notify these property holders?	Section II.7

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
Mike & Jean Riley	11	MEPA Doc.	f	In any other area subdivision the developer must disclose their full plan not just one phase. As we see it DEQ has two options here, you can limit the mining permit to the 111 acres and never allow expansion or you can fully disclose all impacts.	Section II.7
Joseph Nye	26	MEPA Doc.	f	My concern is that HS&G may be attempting to deliver an initial blow to the surrounding community and then obtain additional permits by comparing future impacts to those they are approved to operate under for this permit.	Section II.7
Holly Mook	30	MEPA Doc.	f	What are HS&G's true intentions with the mine?	Section II.7
Lewis & Clark County Water Quality Protection District	39	MEPA Doc.	f	Several large subdivisions have been developed recently in this area and should be added to the Cumulative Impact Analysis. Also HS&G's plan to move the facility activities to the permitted Foster Site in the future should be considered in this impact analysis	Section II.7
Jim Skinner	64	MEPA Doc.	f	I find the EA produced by DEQ for HS&G's proposed pit to be vastly inadequate in providing an accurate and cumulative assessment of the potentially significant impacts.	Section II.7
Bob Burke	97	MEPA Doc.	f	DEQ needs to have an understanding of HSG long term plans for the property and factor it into the EA.	Section II.7
James & Candace Wilbur	9	MEPA Doc.	g	The list is missing a DEQ Industrial Stormwater permit, a County Approach Permit, and possibly others. Does not MEPA require when multiple applications or permits are required from one or more agencies that a combined MEPA analysis document is produced under 75-1-206 MCA? If so, why has this not been done in this case?	Section II.7
Mike & Jean Riley	11	MEPA Doc.	g	DEQ did not follow the process in 75-1-206 MCA.	Section II.7
Amy and Scott Thiel	66	MEPA Doc.	h	The Constitution of the State of Montana guarantees us the right to a clean healthful environment.	Section II.7
Marie Connolly	121	MEPA Doc.	h	Approval of this pit will deny me and neighboring residents a clean and healthful environment in violation of Article II, Section 3 of the Montana Constitution and I request, at the very least. That the DEQ requires HS&G to subject this property to a complete environmental impact statement.	Section II.7
Mike Sedlock	105	MEPA Doc.	i	DEQ has not followed MEPA.	Section II.7
Jenny Senn	32	Miscellaneous	a	As an employee of HS&G I can tell you that public comments are taken very seriously.	Thank you for your Comment
Lewis & Clark County Water Quality Protection District	39	Miscellaneous	a	The Stockburger Ditch is not located adjacent to the existing Helena Valley Irrigation District Main Canal at the north end of the site. It runs diagonally across the site from the southwest to the northeast corner.	Thank you for your Comment
Montana Contractors' Association / Cary Hegreberg	86	Miscellaneous	a	There are no substantive environmental impacts that cannot be adequately mitigated.	Thank you for your comment
Bob Burke	97	Miscellaneous	a	Is there going to be an access road from the site to Valley Drive? The EA mentions access but figure 2 does not indicate the location of the access?	Thank you for your comment
Ron Johnson	118	Miscellaneous	a	We are very concerned about the same issues that most of the area have concerns over.	Thank you for your comment

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
Joseph Nye	26	Miscellaneous	a	DEQ may be approving HS&G to operate in a means that could be defined as Disorderly Conduct MCA 45-8-101.	Thank you for your Comment
James & Candace Wilbur	9	Mitigation	a	Anyone who lives in the area would realize that no mitigation would be provided either visually or for noise by newly planted vegetation. The time for these plants to grow in this environment would likely take the stated life of the facility of ten years to even have some size. Trees, shrubs have no proven ability to block noise from nearby residences.	Section II.8
James & Candace Wilbur	9	Mitigation	a	With the eventual mining of the 1000-foot buffer with feeder and jaw crusher operations in that area, no mitigation of noise, dust, and light pollution can be considered to be provided in this analysis by that proposal.	Section II.8
James & Candace Wilbur	9	Mitigation	a	Berms have limited ability to buffer noise and the proposal to build the one berm on the west side is ridiculous to consider having any real mitigating potential. Lights and dust would not be affected by the shielding options mentioned. There is no data to support the claims of mitigating effects.	Section II.8
Paul O'Loughlin	19	Mitigation	a	If the mounds and trees mitigate noise they should be on the North, South, and West sides of the property.	Section II.8
Dave White	24	Mitigation	a	Noise should be monitored.	Section II.8
LaCasa Grande Subdivision/ Sue Leferink	28	Mitigation	a	In mitigation the berm should be erected around the entire perimeter of the working area to minimize noise, dust and visual effects.	Section II.8
Tracy Mabry	70	Mitigation	a	There is really nothing that can be done about the noise from gravel crushing and trucks roaring up and down the road. There is nothing at all that can be done about the smell from the batch plant.	Section II.8
John Johnson	75	Mitigation	a	Regardless of the efforts of HS&G to mitigate the impacts (downward facing lights, digging the production facility below the ground level, earthen berms, etc,) the site will be an eyesore and a noise nuisance for decades to come.	Section II.8
Bob Burke	97	Mitigation	a	If HS&G is concerned about neighbors why doesn't the plan incorporate berms placed statically to reduce noise around the entire perimeter of the property?	Section II.8
Shelley Jucan	144	Mitigation	a	HS&G needs to try and reach an agreement for acceptable levels of light pollution.	Section II.8
James & Candace Wilbur	9	Mitigation	b	Also, the water for the proposed irrigation plans presented for the plantings and berm reseeding is not accounted for in the previous section water supply amounts.	Section II.8
Paul O'Loughlin	19	Mitigation	b	If they are going to plant trees and grass and water them, the requirement to have that happen within a few months should be mandatory, not left open for 2 years.	Section II.8
Tim and Dorothy Cail	37	Mitigation	b	They would agree to keep the irrigation system in place for the life of the pit, this would greatly increase the chances of the trees surviving. They need to plant at least 5 year old trees (hopefully evergreens) to create sound and sight barrier.	Section II.8
Kathy Moore	47	Mitigation	b	HS&G does not have adequate water rights or legal availability of water to plant vegetation or screening	Section II.8

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
				trees and keep them alive.	
Kathy Moore	47	Mitigation	b	Without longer-term watering (longer then 2 years) the vegetation will probably die.	Section II.8
Abigail Hulme	56	Mitigation	b	Would like requirements that would require HS&G to construct berms and provide vegetation to minimize the look and feel of an industrial zone on all side.	Section II.8
Abigail Hulme	56	Mitigation	b	Watering will not be enough to control dust and keep vegetation alive, without detailed requirements I fear that this important component will be overlooked as appears to have happened at the operation down the road.	Section II.8
Larry E Renney	60	Mitigation	b	Hydro seeding will not hold the soil in place until plants are well established.	Section II.8
Bob Burke	97	Mitigation	b	What segments of the property boundary have trees? It will take years before they help to reduce noise and become a visual screen. Will the trees be replaced if they die?	Section II.8
Shelley Jucan	144	Mitigation	b	EA does not identify what age the trees and shrubs will be.	Section II.8
David Schnittgen	148	Mitigation	b	Even when the vegetation is established, studies have shown that vegetation will not effectively deaden the sound. The berms are only effective in areas behind the berm, as sound is able to warp around objects.	Section II.8
Joseph Nye	26	Mitigation	c	This location warrants far more then the simple use of water to control dust, yet in the EA there is no discussion of plans to add wetting agents to the process as a means of improving the water's ability to wet and agglomerate fine particles. I assume the plan is to wet locations with a water truck. Knowing demands placed on said trucks, I recommend that some type of automated system be installed.	Section II.8
Paul O'Loughlin	19	Mitigation	d	Certain things HS&G agreed to do should be noted as part of the permit, so they are held legally responsible like; paving roads in the pit area, pollution and noise abatement.	Section II.8
Joseph Nye	26	Mitigation	d	The EA does not state what process the residents will need to go through if they feel the berm needs to be created.	Section II.8
Joseph Nye	26	Mitigation	d	Concerned about the issuance of a permit without appropriate guidelines will leave residents helpless should aesthetic issues arise.	Section II.8
Abigail Hulme	56	Mitigation	d	Request that HS&G be required to regularly evaluate noise and dust, the water quality in surrounding wells and the level of the water table, soil samples, road wear and tear etc. to assure that the impact of the operation coincides with what is outlined in the EA.	Section II.8
Wayne Stockton	63	Mitigation	d	I think the rules & guidelines exist, along with overseeing agencies to see that these problems are dealt with and can be lived with by all.	Section II.8
Phil Porrini	73	Mitigation	d	Safeguards will be in-place and environmental monitoring, that is typically required for active pits, will ensure that current regulations are upheld.	Section II.8
John Johnson	75	Mitigation	d	Make them live with what they have stated they will do (light/noise pollution abatement, buffer zones, ect) and within the natural resource use constraints they have said they will need (water, buffer zones, etc)	Section II.8

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
Scott Walter	106	Mitigation	d	The extent and scope of this mitigation should be detailed with the advice and approval of those parties directly impacted.	Section II.8
Bill and Yvonne	5	Noise & Light	a	We are concerned about the noise.	Section III.8
Kathy Burlinson	6	Noise & Light	a	I am concerned about the noise pollution from the crusher.	Section III.8
Eastgate Village Water & Sewer Association, Inc./Paul Johnson	10	Noise & Light	a	Distant rumbling would be heard constantly. Large trucks would rattle through the area at all times of the day and night.	Section III.8
Ryan Williams	14	Noise & Light	a	Concerns about noise.	Section III.8
Laverne Hravirland	21	Noise & Light	a	Noise levels going up.	Section III.8
Laraine Tedesco	27	Noise & Light	a	Noise pollution will go up.	Section III.8
Grandview HOA/Michael Sedlock and Clifford Smith	44	Noise & Light	a	It is not feasible to believe that even with the most advanced "noise suppression technology" that noise from their operation will not be heard within the entire housing area.	Section III.8
Kathy Moore	47	Noise & Light	a	One could hope that they would instruct their drivers to not use these loud and obnoxious methods of slowing a truck.	Section III.8
Det Meskimen	48	Noise & Light	a	Noise will be an irritation.	Section III.8
William and Lisa Durbin	51	Noise & Light	a	Request that the new equipment be described in the document, including the decibel level, to show HS&G's commitment to residents.	Section III.8
Cory Mabry	72	Noise & Light	a	I deserve to enjoy my yard without the noise that a gravel pit will produce.	Section III.8
Brian Connolly	79	Noise & Light	a	Noise pollution is a concern.	Section III.8
Victor and Jonett Berg	96	Noise & Light	a	Concerns of noise pollution.	Section III.8
Jim and Michelle Schweyen	115	Noise & Light	a	Sounds will be noticeable so close to our home.	Section III.8
Brenda Thomas	126	Noise & Light	a	There won't be much of a barrier on sound.	Section III.8
Julie Banschbach	134	Noise & Light	a	Concerns about the noise.	Section III.8
Bill and Judy Schwyer	137	Noise & Light	a	Opposed due to noise pollution.	Section III.8
Viola Zindell	146	Noise & Light	a	The noise is a threat to our way of life.	Section III.8
David Schnittgen	148	Noise & Light	a	Why was the use of compression breaks not mentioned in the noise and light portion of the EA?	Section III.8
Ona Lepard	31	Noise & Light	b	The noise decibel level produced will exceed standards, especially considering the mine will operate at night.	Section III.8
Frank Miller	34	Noise & Light	b	I can hear the noise from the plant on Canyon Ferry Rd. in the summer time while we sleep with the windows open.	Section III.8
Bryan & Joan Lewis	1	Noise & Light	b	Noise will disrupt our sleep and the quiet quality of life in our neighborhood.	Section III.8

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
Debra McLarnon	4	Noise & Light	b	There will be an increase in noise pollution. How will this affect people's sleep thus affecting their work ability?	Section III.8
Carla Sturn	17	Noise & Light	b	The noise of the trucks keeps us awake or wakes us up.	Section III.8
Jim Skinner	64	Noise & Light	b	The EA does not provide analysis of the effectiveness of noise/light suppression mitigation measures recommended. Considering the anticipated decibel levels produced not only by the stationary equipment, but also by the mobile mining equipment, the potential impacts associated with loss of sleep by area residents and the nuisance of this site will be a significant impact on the existing community.	Section III.8
James & Candace Wilbur	9	Noise & Light	c	Baseline data and analysis of the noise levels for the surrounding homes has not been provided nor has any monitoring plans or scientific data been provided to substantiate claims of mitigating effectiveness.	Section III.8
Kim Kuderna	15	Noise & Light	c	They should have data on the noise level at the plant.	Section III.8
Paul O'Loughlin	19	Noise & Light	c	A noise study should be done.	Section III.8
Jim Skinner	64	Noise & Light	c	The EA provides no baseline analysis of the existing noise levels in the communities adjacent to this proposed gravel pit as compared to the expected noise and light generated by this facility.	Section III.8
Steve Lindberg	128	Noise & Light	c	To simply say the noise levels of operations are at 60-90 decibels is false. There is no data calculating the noise exposure at the property boundary.	Section III.8
Steve Lindberg	128	Noise & Light	c	Where is the data for the study that says what the noise levels will be at the property edge and the DEQ agreeing that those levels are acceptable in a residential area for a 24 hour a day commercial operation.	Section III.8
Joseph Nye	26	Noise & Light	d	Does not have any type of monitoring requirements placed on operations to determine what noise levels will actually be seen nor does it define what will be acceptable.	Section III.8
Shelley Jucan	144	Noise & Light	d	EA fails to disclose any type of monitoring requirements placed on operations to determine what noise levels will actually be heard, nor does it define what will be acceptable.	Section III.8
David Schnittgen	148	Noise & Light	e	Diesel truck engines produce 90 decibels of sound. This is the level at which sustained exposure can cause hearing loss. This noise will have a negative impact on resident quality of life.	Section III.8
David Schnittgen	148	Noise & Light	e	Increased noise can lead to increased irritability and stress. This can cause problems ranging from psychological to cardiovascular (due to high blood pressure from stress) due to disturbance in sleep patterns. Concentration and performance can be impaired and aggressiveness in people can increase.	Section III.8
Kathy Burlinson	6	Noise & Light	f	Lights from the new location will probably shine directly in my back sliding glass door. As the lights at the current location do not "shine down" as described by HS&G.	Section III.8

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
Eastgate Village Water & Sewer Association, Inc./Paul Johnson	10	Noise & Light	f	Lights would be a constant source of annoyance.	Section III.8
Desirae Osborne	104	Noise & Light	f	I do not want to compete with bright lights and loud noise, the loud machinery and trucks driving near by would be distracting as well.	Section III.8
John and Joyce Yager	125	Noise & Light	f	Concerns of noise and light pollution.	Section III.8
David Schnittgen	148	Noise & Light	f	Even with lights being pointed down a glow will be produced in the area.	Section III.8
Eastgate Village Water & Sewer Association, Inc./Paul Johnson	10	Noise & Light	g	Vibrations from these trucks could directly affect the stability of the lagoon and/or water and sewer lines.	Section III.8
Eastgate Village Water & Sewer Association, Inc./Paul Johnson	10	Noise & Light	g	There are concerns that the vibration generated by the operation (most notably the truck traffic) could adversely affect the structural stability of the solar operation.	Section III.8
Ona Lepard	31	Noise & Light		Sufficient data needs to be collected and analyzed to ensure the neighborhoods will remain peaceful and quiet.	Section III.8
Debra McLarnon	4	Property Values	a	The landscape would not be nearly as pretty and the possibility of the value of the home would decrease.	Section III.21
Kathy Burlinson	6	Property Values	a	I am concerned having a gravel pit behind my property will decrease the fair market value of my property.	Section III.21
James & Candace Wilbur	9	Property Values	a	If scientific data is not available on the question of adjacent property value devaluation because of proximity to gravel pits and industrial facilities perhaps DEQ should conduct the appropriate science-based research to determine the reality of the issue rather than depend on subjective statements as quoted in the EA.	Section III.21
Eastgate Village Water & Sewer Association, Inc./Paul Johnson	10	Property Values	a	Property values would go down. These values would decrease further should residents see increases in noise, dust, light etc.	Section III.21
Eastgate Village Water & Sewer Association, Inc./Paul Johnson	10	Property Values	a	The Eastgate Water & Sewer Association's holdings to the east and south of the proposed gravel pit would be devalued significantly.	Section III.21
Le Ann Ferron	12	Property Values	a	Lower property values will be the first reality.	Section III.21
Ryan Williams	14	Property Values	a	This will lower my property value. Due to the fact that we share a boundary.	Section III.21
Charles & Carol Aumell	20	Property Values	a	Surrounding area residential property value will decrease.	Section III.21
Laverne Hravirland	21	Property Values	a	Property values will go down.	Section III.21
Vicki Hewitt	25	Property Values	a	Our property values will go down.	Section III.21
Joseph Nye	26	Property Values	a	Loan risk will go up either resulting in lower loan amount approvals or increased interest rates for potential homebuyers.	Section III.21

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
Joseph Nye	26	Property Values	a	Would like to see some type of benefit to cost analysis completed to compare the increased tax income verse the surrounding residents cost, i.e. increased travel delays, reduced home resale values, increased interest rates for new home buyers, and general safety.	Section III.21
Laraine Tedesco	27	Property Values	a	Property values will go down.	Section III.21
Ona Lepard	31	Property Values	a	Property values will plummet.	Section III.21
Ona Lepard	31	Property Values	a	My property values, should this pit be approved, will plummet	Section III.21
Steven Goodrich	42	Property Values	a	I suspect our site was chosen in part because of our property and residents were considered to be of lesser value and importance that the advertised site for the pit.	Section III.21
Kevin Kauska	46	Property Values	a	This will directly impact the house market in this area. Would like to see studies about the house market impact in other areas where gravel pits have been placed in the middle of residential communities.	Section III.21
Kathy Moore	47	Property Values	a	Is it the state's position that "potential" purchasers are given more consideration then long-time -state tax paying – residents?	Section III.21
Det Meskimen	48	Property Values	a	Resale values will go down as a result of the pit.	Section III.21
Dave Sedlock	58	Property Values	a	The property value of the houses around the pit will depreciate.	Section III.21
Cliff Neiffer	59	Property Values	a	This will impact me because of higher prices and the inability to sell my house.	Section III.21
Diane and Rich Manos	62	Property Values	a	Potential devaluation of our properties could be devastating.	Section III.21
Ross Campbell	76	Property Values	a	Between threats of bad water, superfund dust, noise, bright lights and additional traffic, it's making home sales hard.	Section III.21
SFC Thomas J Basso	78	Property Values	a	Will seriously degrade where I have chosen to live as well as ruin my property value. I have worked hard to get my place and the location was the biggest factor in buying it.	Section III.21
Brian Connolly	79	Property Values	a	Negative impact in an already unstable housing market for this area.	Section III.21
Angie Mardis	83	Property Values	a	How will this affect the already lagging economy when it comes to real estate? Values of homes will plummet.	Section III.21
Chuck Price	85	Property Values	a	Concerned as a homeowner about my property value.	Section III.21
Karen Lindquist	88	Property Values	a	The noise level and ever present lighting will have an adverse impact on our quality of life and property values.	Section III.21
Victor and Jonett Berg	96	Property Values	a	Effect of all these issues on our property value.	Section III.21
Bob Burke	97	Property Values	a	Property value would be significantly reduced.	Section III.21
Mark Scherer	101	Property Values	a	This is a residential area and in order for them to have property rights they will be trampling all over mine and everyone around this area. What about our property rights?	Section III.21

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
Dave Mergenthaler	102	Property Values	a	Devastating effect on property values and quality of life.	Section III.21
Mike Renney	103	Property Values	a	Impact on the values of the property surrounding the pit.	Section III.21
Linda Priest	116	Property Values	a	May experience a decrease in value of homes.	Section III.21
Miles and Rita Watson	117	Property Values	a	Property value has already decreased to a level that property is now unsellable. Lending institutions have already been advised to "proceed with caution" when considering financing property in the area.	Section III.21
Brenda Thomas	126	Property Values	a	Property values will go down.	Section III.21
Becky Weinger	133	Property Values	a	Concerned with property values.	Section III.21
Bill and Judy Schwyer	137	Property Values	a	Opposed due to land value impacts.	Section III.21
Susan Spotorno and Sandra Milsten	145	Property Values	a	The property will be undesirable.	Section III.21
Shelley Jucan	144	Property Values	b	DEQ states that is has no authority or jurisdiction over property value, it does not state who has this authority.	Section III.21
John Johnson	75	Recreation		Would be nice if there were a better plan for the future of this parcel of ground than just dumping in the old contaminated topsoil and throwing some grass seed on it. This could be an opportunity to do something better, they could make a park or a bike course or something.	Section III.17
Tim and Dorothy Cail	37	Soils	a	If the berm is to be built during the entire life of the pit then how is it to be planted with grass to keep it from blowing when the wind blows? What is being done with the topsoil removed?	Section III.1
Natalia Rogers	8	Soils	a	The soil sampling done is ridiculously small for 111.5 acres. All sites of the proposed site have had the soil replaced due to contamination by ASARCO, yet these 111.5 acres in the middle are not contaminated?	Section III.1
James & Candace Wilbur	9	Soils	a	A more extensive sampling was done in Oct. 2007, it found lead levels in some cases, ten times higher levels on-site then indicated in the EA and the presence of elevated soil levels of arsenic and cadmium. The EA without this data was misleading.	Section III.1
James & Candace Wilbur	9	Soils	a	Further baseline data of the presences of toxic metal soils contaminants is necessary.	Section III.1
Joseph Nye	26	Soils	a	Samples should be analyzed on a per acre basis.	Section III.1
Grandview HOA/Michael Sedlock and Clifford Smith	44	Soils	a	Additional soil sampling information is not discussed at all in the EA.	Section III.1
Kathy Moore	47	Soils	a	16 additional samples were taken in Oct. 2007, those results are not included or analyzed in the EA.	Section III.1
Abigail Hulme	56	Soils	a	Question whether the two sample method was effective to adequately assess for environmental impact and the health and safety of nearby residents.	Section III.1

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
East Helena Lead Education and Abatement Program / Jan Williams	65	Soils	a	We believe that a better characterization of the site is needed and we recommend up to 55 additional areas to be sampled. The EPA has proposed an action level for commercial areas of 1300 ppm lead. This is of paramount importance since residential areas primarily surround the proposed pit.	Section III.1
Amy and Scott Thiel	66	Soils	a	How can DEQ adequately insure the safety of airborne lead, arsenic and cadmium, when they don't even have an accurate measurement?	Section III.1
Angela Jones	123	Soils	a	I do not see how two samples over a 100 acre area can be seen as proper testing within this site.	Section III.1
Steve Lindberg	128	Soils	a	Additional pit samples need to be taken at a rate of one pit per ten acres to a depth of 18 inches.	Section III.1
Shelley Jucan	144	Soils	a	Soil sampling taken for lead analysis appears to be low, given the size of the property.	Section III.1
David Schnittgen	148	Soils	a	I question the findings of lead levels to being 80 ppm and 1200 ppm.	Section III.1
Natalia Rogers	8	Soils	b	The EA does not actually deal with any cleanup of the disturbed soil. It does not address the issue of any contaminants already existing in the soil from the Super Fund site, or any future contaminants introduced by the various operations HS&G seeks to carry out.	Section III.1
Le Ann Ferron	12	Soils	b	If they planned to adhere to regulations, they would voluntarily reclaim the land and have a plan to fill in any pits they create with non-contaminated soil.	Section III.1
Carla Sturn	17	Soils	b	Soil is contaminated with arsenic, lead and whatever else from the smelter.	Section III.1
Joseph Nye	26	Soils	b	Permitting based on the EA as it currently reads will basically be placing soils on only a 5 ft filtration layer as opposed to the existing 45 ft.	Section III.1
LaCasa Grande Subdivision/ Sue Leferink	28	Soils	b	The contaminated soil should be removed from the site and replaced to prevent the potential re-contamination of reclaimed soil in the surrounding area. This would reduce contamination in the area from increased traffic and prevent further groundwater contamination.	Section III.1
William and Lisa Durbin	51	Soils	b	Request that an alternate plan be required for the contaminated material. Instead of hydro seeding and irrigating it the money should be spent on hauling the material away and disposing of it at an approved site. Perhaps the material can be buried on a part of their land that does not have contaminated topsoil.	Section III.1
Wade and Linsey Feller	67	Soils	b	Concerned that you are going to allow them to re-use the topsoil. If they want to do business there let them replace all contaminated soil.	Section III.1
Bradley Kolberg	91	Soils	b	Concerned about the amount of lead, cadmium, and arsenic that are present in the field.	Section III.1
Ronald Nelson	95	Soils	b	Concerned about the disturbance of soils in an area that has already been determined an "area of concern" due to heavy metals contained in the water obtained from Prickly Pear Creek, which was used to irrigate the property.	Section III.1
Scott Walter	106	Soils	b	"Proposed Action would add an incremental increase to the threat of lead-impacted dust in the valley." Can the term incremental be defined and quantified?	Section III.1

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
Samuel Osborne	119	Soils	b	Lead contaminate varies acre to acre. At least 10 acres should be conducted not two for 100 acres	Section III.1
James & Candace Wilbur	9	Soils	c	EPA has yet to establish a Record of Decision of the cleanup of contaminated soils in the areas that include this property. I believe that HS&G, EPA, and DEQ will incur significant liability if land disturbance of this level is allowed or permitted in an area that is designated a CERCLA Superfund Site with no current limits of exposure established in accordance with federal law.	Section III.1
Miles and Rita Watson	117	Soils	c	Why would this area even be considered when it is a U.S. EPA Superfund Site?	Section III.1
James & Candace Wilbur	9	Soils	d	The incremental increase stated in the Cumulative Impacts section from lead-impacted dust to the valley would be much greater to the adjacent landowners. No agricultural land disturbance as described in the EA is occurring on lands within the Superfund Site designation.	Section III.1
Le Ann Ferron	12	Soils	e	Too numerous studies to mention were also done on contamination that occurs when the gravel pit is not reclaimed. These studies found that these pits that are not reclaimed are used illegally as landfills. These studies found almost all the gravel pits were contaminated by liquid contaminants like oil, gas, fertilizers, sewage, etc. and solid materials like cars, appliances, etc.	Section III.1
Tim and Leslie Brandt	71	Soils	e	I hate the idea that they would reclaim the land but leave a forty foot hole with existing topsoil. I thought reclamation was returning that land to its original state or better yet improving the site.	Section III.1
Dave Swanson	84	Soils	e	What is the erosion control plan for flood events known to occur in this area?	Section III.1
Mark Scherer	101	Soils	e	All I see is a big crater, old water, and land that is not reclaimed to be useful.	Section III.1
Great West Engineering / Bob Church	2	Traffic	a	It is my opinion that HS&G should be required to conduct a traffic study as part of a more detailed EA.	Section III.11
Great West Engineering / Bob Church	2	Traffic	a	There will be adverse impacts to pavement life, safety to pedestrians, and turning issues on both the intersections of Lake Helena Dr./Canyon Ferry and Lake Helena Dr./Highway 12.	Section III.11
Debra McLarnon	4	Traffic	a	HS&G said that this would increase on average 121 trucks per day; this did not include consumers or employees.	Section III.11
Natalia Rogers	8	Traffic	a	There is no data to prove that there will only be a slight increase in traffic, or to prove on the increase in truck traffic on Lake Helena and surrounding areas.	Section III.11
James & Candace Wilbur	9	Traffic	a	HS&G stated that truck traffic would not be as stated in the EA as 77 truck trips per week, but actually 128 loaded truck trips per day. That equals 256 truck trips a day including return trips. This number does not include their retail traffic of private vehicles picking up products or the employee vehicle trips to and from work.	Section III.11

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
James & Candace Wilbur	9	Traffic	a	The reconstruction of Canyon Ferry Road has been delayed until 2009 so if this facility was permitted in 2008 traffic impacts to Eastgate area, schools, access to U.S. Hwy 12, would be of significant impact by this type and volume of traffic.	Section III.11
Eastgate Village Water & Sewer Association, Inc./Paul Johnson	10	Traffic	a	The current roadway does not have geometrics to allow for proper turning movements and has slopes that are substandard. The road is narrow, large trucks cannot turn onto (or off) Lake Helena Dr. without impacting oncoming traffic. This would result in serious traffic issues at several points along the road.	Section III.11
Mike & Jean Riley	11	Traffic	a	Amount of traffic that will result from this operation affecting Lake Helena Dr. is under reported.	Section III.11
Mike & Jean Riley	11	Traffic	a	The document states, " Occasional trucks would go south on Valley Dr. or Lake Helena Dr. into East Helena." this does not accurately reflect what would occur.	Section III.11
Lewis & Clark County Public Works Dept	13	Traffic	a	Lewis & Clark County is the permitting agency for the approach onto Lake Helena Dr. There is inadequate information available in the draft EA for us to consider issuing an approach permit. We would need the following information prepared and submitted by HS&G through your EA process to consider an approach permit: A detailed Traffic Impact Study (TIS) is needed to assess project specific, as well as cumulative impacts, to the transportation system.	Section III.11
Tina Shorten	16	Traffic	a	Lake Helena Dr. not built for this kind of usage.	Section III.11
Merrilee Coleman	23	Traffic	a	Traffic is already risky, adding more big trucks is irresponsible. Roads and intersections need to be widened.	Section III.11
Dave White	24	Traffic	a	Traffic to the north will increase, a traffic light at Canyon Ferry and Lake Helena Drive should be required.	Section III.11
Joseph Nye	26	Traffic	a	We should anticipate a more realistic value of at least 180 trucks per day if 6,300,000 cubic yards is planned for removal.	Section III.11
Joseph Nye	26	Traffic	a	EA did not provide any information as to what the increased delay may actually be to the traveling public.	Section III.11
MT Dept. of Transportation/ Steve Prinzing	29	Traffic	a	Development of a detailed Traffic Impact Study (TIS) is needed.	Section III.11
Paul Williams	33	Traffic	a	Intersection of Canyon Ferry Dr. and Lake Helena Dr. is too narrow for a gravel truck to turn east or west without going into the oncoming traffic lane.	Section III.11
MT Dept. of Transportation/ Jean Riley	41	Traffic	a	MDT has scheduled the improvements to Canyon Ferry Dr. for the 2009 Construction season.	Section III.11
MT Dept. of Transportation/ Jean Riley	41	Traffic	a	MDT will be working with Lewis & Clark County concerning the roadway impacts of this proposed development. Mitigation for impacts to the MDT facilities has not been determined.	Section III.11
Grandview HOA/Michael Sedlock and Clifford Smith	44	Traffic	a	The corner of Valley Dr. and Canyon Ferry Rd. is one of the highest traffic accident areas in the Helena area, it is reasonable to assume that this accident rate would increase due to the HS&G traffic.	Section III.11

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
Kathy Moore	47	Traffic	a	Neither of the intersections are constructed to handle additional traffic, including heavy traffic.	Section III.11
Kathy Moore	47	Traffic	a	The estimate of 77 truck trips per week in the EA is inaccurate.	Section III.11
William and Lisa Durbin	51	Traffic	a	Request plans to update the road be discussed.	Section III.11
Christopher Jones	55	Traffic	a	Current infrastructure will not meet the demands necessary for the increase in heavy truck traffic. It is not designed to stand the extra weight and turning movements that will be required with large trucks.	Section III.11
Andrew Quist	57	Traffic	a	Lake Helena Drive is already congested, additional traffic will not help the situation, considering construction efforts will be going on for the next 2 years on the Canyon Ferry Rd.	Section III.11
Jim Skinner	64	Traffic	a	EA underestimates the actual number of large truck trips that will be produced as a result of this action.	Section III.11
Jim Skinner	64	Traffic	a	EA should include a traffic impact study to adequately identify the safety and operational issues and associated mitigations to address those impacts.	Section III.11
John Johnson	75	Traffic	a	Extending traffic to include Valley Dr. and Lake Helena Dr. without significant road improvements is irresponsible.	Section III.11
Brian Connolly	79	Traffic	a	Truck traffic is a major concern. Trucks will create a bottleneck at a very busy intersection.	Section III.11
Chuck Price	85	Traffic	a	Concerned about increased truck traffic flow on the roadways nearby.	Section III.11
Lewis & Clark County / Public Works Department	87	Traffic	a	Lewis & Clark is the permitting agency for the approach onto Lake Helena Dr. There is inadequate information available in the draft EA for us to consider issuing an approach permit.	Section III.11
Bob Burke	97	Traffic	a	Seems to be a large number of traffic accidents at the corner of Canyon Ferry Rd. and Lake Helena Dr. Will the intersection be widened, with a stoplight?	Section III.11
Anita Lincoln	99	Traffic	a	Is 121 really a correct number now? How do we tell? How many private vehicles will be there also?	Section III.11
Mark Scherer	101	Traffic	a	Canyon Ferry is already dangerous and cannot handle the big trucks that will be traveling in this road.	Section III.11
Mike Sedlock	105	Traffic	a	EA understates the amount of increased traffic that will occur not to mention the increased traffic congestion and ped/bike safety. A full assessment is necessary.	Section III.11
Scott Walter	106	Traffic	a	When does a slight increase become a significant increase? The estimated number of vehicles is incorrect.	Section III.11
Jared and Heather Lay	108	Traffic	a	The estimated truck load of 150 trucks is too high for the roads that will be used.	Section III.11
Marie Connolly	121	Traffic	a	To increase traffic on the worst section of 2 lane Canyon Ferry Rd. with an additional 200 trucks per day would not be only unwise, but deadly.	Section III.11
Will Tangen	122	Traffic	a	The large truck traffic will be an increase over what exists today. This road will not withstand the added truck traffic. This will also be very unsafe.	Section III.11
Angela Jones	123	Traffic	a	The current infrastructure will not meet the demands necessary for the increase in heavy truck traffic. Nothing has been mentioned on this issue.	Section III.11
John and Joyce	125	Traffic	a	Concerned of increased traffic.	Section III.11

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
Yager					
Steve Lindberg	128	Traffic	a	Even when Canyon Ferry Rd. is further developed the surrounded roads cannot support the increased traffic.	Section III.11
Shelley Jucan	144	Traffic	a	EA states that 6,300,000 cubic yards of material is planned to be removed. Using this information as outlined in the calculation below we believe we should anticipate a more realistic value of at least 180 trucks per day.	Section III.11
Shelley Jucan	144	Traffic	a	EA does not provide realistic information to the public concerning traffic flow.	Section III.11
Susan Spotorno and Sandra Milsten	145	Traffic	a	Traffic flow in the area would be more congested than it is.	Section III.11
David Schnittgen	148	Traffic	a	Left turns onto Lake Helena will cause trucks to have to negotiate crossing the southbound lane of Lake Helena Dr.	Section III.11
David Schnittgen	148	Traffic	a	The trucks will almost have to partially go into the ditch on the west side of Lake Helena Dr. to negotiate these turns.	Section III.11
David Schnittgen	148	Traffic	a	With the speed of traffic on Canyon Ferry in the area of the intersection it may cause trucks to have to wait long periods of time to safely turn onto Canyon Ferry. This could cause "platooning" of vehicles behind the trucks, which will create more hazards due to rear end collisions and impatient drivers making risky turns onto Canyon Ferry.	Section III.11
David Schnittgen	148	Traffic	a	HS&G should be required to have a comprehensive TIS performed in regards to the proposed Lake Helena-Valley Dr. pit location.	Section III.11
Pat Helven	3	Traffic	b	Concerns about road impacts.	Section III.11
Debra McLarnon	4	Traffic	b	The increase usage of Canyon Ferry will increase travel time and deteriorate more of that road quicker.	Section III.11
Debra McLarnon	4	Traffic	b	There are many people who work in Helena so Lake Helena Drive and Canyon Ferry Rd are used greatly.	Section III.11
Kathy Burlinson	6	Traffic	b	Traffic would naturally be re-routed during the reconstruction of Canyon Ferry Rd. How will this be handled?	Section III.11
James & Candace Wilbur	9	Traffic	b	Lake Helena Drive is a county road that is substandard for the current traffic levels due to narrowness of road surface, lack of shoulders, and slope steepness of the roadbed. This level of increased traffic of large loaded trucks more than "slightly increase the danger to pedestrian and bicyclists, .." as stated in this EA. Safety issues for all users including other vehicles would increase substantially if this level of truck traffic was added to Lake Helena Drive.	Section III.11
James & Candace Wilbur	9	Traffic	b	Large truck turning radii at intersections of the facility access road, junctions with Old Highway 12 (Main St) and Highway 12 are unsafe and would impact human safety.	Section III.11
Mike & Jean Riley	11	Traffic	b	EA indicated there will be additional traffic on Valley Dr. Reviewing the map there is no access from the property to Valley Dr., the access is on Lake Helena. This must be corrected.	Section III.11
Tina Shorten	16	Traffic	b	Do not want to pay extra taxes to accommodate extra traffic.	Section III.11

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
Vicki Hewitt	25	Traffic	b	No need for extra truck traffic in a growing community with small children.	Section III.11
Joseph Nye	26	Traffic	b	Would like to see the potential increase in the number of vehicle/pedestrian conflicts examined.	Section III.11
Joseph Nye	26	Traffic	b	Increased rear end or right angle collisions.	Section III.11
MT Dept. of Transportation/ Steve Prinzing	29	Traffic	b	EA is lacking in identifying, assessing and recommending mitigation for the proposed action impacts to the safety of the traveling public and operation of the adjacent roadway.	Section III.11
Tom Allan	36	Traffic	b	Another access road to the west of Valley Dr. for safety and for fire and medical access.	Section III.11
MT Dept. of Transportation/ Jean Riley	41	Traffic	b	MDT does not own or maintain Lake Helena Dr. All approach permitting actions will be through Lewis & Clark County.	Section III.11
Jim Little	53	Traffic	b	The traffic out east is, and will always increase.	Section III.11
Jim Skinner	64	Traffic	b	EA does not address the health and safety impacts directly associated with the DEQ's action due to the increase of large truck traffic volumes on Lake Helena Dr.	Section III.11
Victor and Jonett Berg	96	Traffic	b	Concerned of traffic and congestion issues.	Section III.11
Anita Lincoln	99	Traffic	b	Traffic with their trucks entering Canyon Ferry Rd. is hazardous.	Section III.11
Mike Renney	103	Traffic	b	Safety concerns due to the increased truck traffic.	Section III.11
Desirae Osborne	104	Traffic	b	Traffic for me is a big concern.	Section III.11
Scott Walter	106	Traffic	b	Both Lake Helena Dr. and Valley Dr. are Lewis & Clark County roads with which MDT had no jurisdiction. Please clarify.	Section III.11
Jesse Aber	107	Traffic	b	Can only imagine how many more accidents we would see with huge loaded trucks.	Section III.11
Thomas A Mendyke	109	Traffic	b	The additional 150 to 250 additional trucks in proximity to a school and residential areas that already are two of the most dangerous roads in the state and threats they pose to motorists, pedestrians, and children at play in the area were not addressed to the satisfaction of anyone not employed by HS&G.	Section III.11
Brenda Thomas	126	Traffic	b	The roads in this area are not the best now.	Section III.11
John and Megan Sarginer	127	Traffic	b	You are going to add more trucks to an already busy and deadly street.	Section III.11
Julie Banschbach	134	Traffic	b	Concerns about high traffic.	Section III.11
David Von Bergen	135	Traffic	b	Roads will be torn up, there will be way more traffic.	Section III.11
Shelley Jucan	144	Traffic	b	The general growth and project areas lead us to believe that much more than the occasional truck will travel Highway 12.	Section III.11
David Schnittgen	148	Traffic	b	Lake Helena Dr. is not a state route it is a county road.	Section III.11
David Schnittgen	148	Traffic	b	Gravel spilled on the road is dangerous due to rocks breaking windshields and it is hazardous to bicyclists. Who will be monitoring HS&G to assure they are cleaning up spilled gravel?	Section III.11
Great West Engineering / Bob Church	2	Traffic	c	There will be a significant threat to pedestrians and bicyclists due to the extremely narrow and steep shoulders on this road way.	Section III.11

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
Debra McLarnon	4	Traffic	c	HS&G will increase traffic to Lake Helena Drive. There are children who walk on the street, it is concerning to have children and big trucks sharing the same road that does not have sidewalks.	Section III.11
James & Candace Wilbur	9	Traffic	c	The statement of "Occasional truck traffic would slightly increase the danger to people walking/riding on Valley Drive and Lake Helena Drive." is inaccurate.	Section III.11
Eastgate Village Water & Sewer Association, Inc./Paul Johnson	10	Traffic	c	There would be minimal room for bike/ped traffic along this route creating an additional safety hazard.	Section III.11
East Helena Public Schools/ Ron Whitmoyer	18	Traffic	c	Concern for children walking next to the roadway to and from school.	Section III.11
LaCasa Grande Subdivision/ Sue Leferink	28	Traffic	c	Since traffic will be operating 24-hours a day, additional lighting should be installed along roadway to help increase visibility of pedestrians.	Section II.11
Ona Lepard	31	Traffic	c	What about the children and people who walk up and down other roads (not by the school). It will not be safe.	Section III.11
Karen Lindquist	88	Traffic	c	The safety of the residents in this area needs to be taken into consideration when you are putting several large vehicles on a roadway that has no shoulder or walkway for pedestrian. With a school so close it is an accident waiting to happen.	Section III.11
Bob Burke	97	Traffic	c	Sidewalks are narrow and there is no buffer zone between the walk and Lake Helena Dr. through Eastgate subdivision, Children use the walks and I haven seen them veer off onto the road while riding bikes.	Section III.11
Bob Burke	97	Traffic	c	There is no street lighting along Lake Helena Dr. through Eastgate subdivision which makes it difficult to see children at night.	Section III.11
Mark Scherer	101	Traffic	c	I see this as a hazard to regular traffic as well as pedestrians.	Section III.11
Mike Renney	103	Traffic	c	What is the plan to keep kids and adults safe out of harms way?	Section III.11
Cynthia Sowa	131	Traffic	c	There is no sidewalk so we walk on the edge of the road. 150 truck trips will make our walks unsafe.	Section III.11
Shelley Jucan	144	Traffic	c	EA states that the increased traffic may slightly increase the danger to people walking or riding along the roadside. We believe that the number of truck trips reported was low. If this in fact is low, then are these slight increases, now significant?	Section III.11
Shelley Jucan	144	Traffic	c	Would like to see the potential increase in conflicts with in the number of vehicle pedestrian accident examined.	Section III.11
Natalia Rogers	8	Traffic	d	This road does not meet county road standards as it is. What impact will the HS&G operation have on degrading this road?	Section III.11
James & Candace Wilbur	9	Traffic	d	The impacts to road surfaces by loaded truck traffic is substantial. According to the MT. Dept of Transportation document, "Damage from Heavy Vehicles on Rural Roads of Montana" by Michael Ivanoff and Paul Jagoda, P.E. One trip by a loaded 18 wheel tractor-trailer is equivalent in road surface	Section III.11

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
				damage to 2,380 passenger car trips. A loaded dump truck has the equivalent road surface impact of 1,280 passenger car trips. So, the daily impact to the road surface of Lake Helena Drive and adjacent roadways of 128 loaded trucks and truck-trailer combinations is considerable and will lead to substantial decreases in the life span of those roadways. This impact will be on the county taxpayer who will be responsible for the rebuilding of these roads when they fail.	
Eastgate Village Water & Sewer Association, Inc./Paul Johnson	10	Traffic	d	This type of an increase in truck traffic would have serious impacts to structural stability and traffic safety on Lake Helena Drive. Lake Helena Dr. can not support this type of an increase. The surface material was never designed to handle loads of this magnitude. It was composed primarily of millings and has minimal base material. The roadway would literally crumble away and would have to be reconstructed.	Section III.11
Mike & Jean Riley	11	Traffic	d	Amount of truck traffic will result in the immediate breakdown of pavement. Narrow roads with no shoulders and steep ditch slope along with large trucks will be unsafe for the traveling public.	Section III.11
Joseph Nye	26	Traffic	d	Lake Helena and Valley Dr. are inadequate for such an impact, who will pay for the reconstruction?	Section III.11
Ona Lepard	31	Traffic	d	Roads were not built to withstand pressure from heavy trucks. This would require complete rebuilding of roads which would increase traffic and time spent driving around these areas.	Section III.11
Grandview HOA/Michael Sedlock and Clifford Smith	44	Traffic	d	Valley Dr. and Lake Helena Dr. do not have sufficient underlay material to support the heavy loads.	Section III.11
Det Meskimen	48	Traffic	d	Valley Dr. is not built for increased traffic and heavy truck it will destroy the road bed.	Section III.11
Eastgate Water & Sewer Association/Eastgate I Homeowners Association/ Paul Johnson	54	Traffic	d	The additional trucks would add to congestion concerns in the area, the major effect would involve wear and tear to an already inadequate pavement surface.	Section III.11
Andrew Quist	57	Traffic	d	The county rejected developer Jerry Hamlin's proposal to build 110 homes and 125 condominiums on 165 acres southeast of the Lake Helena Dr. and Canyon Ferry Rd intersection citing concerns over unsafe roadways. Hamlin proposed to pay 50% of the costs to upgrade Lake Helena, replace a bridge and build a bike path. How can they deny this citing unsafe roadways and then allow HS&G the new pit location. Trucks will do more damage to the roadway.	Section III.11
Jim Skinner	64	Traffic	d	EA provides no analysis of the ability of the existing paved surfaces on Lake Helena Dr. to survive under the concentrated truck traffic that will now be directed to this facility as a result of the State's action.	Section III.11
John Johnson	75	Traffic	d	Who is going to pay to upgrade and repair the roads?	Section III.11
Brian and Julie	114	Traffic	d	Roads will be ruined by trucks, who will fix them? Tax	Section III.11

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
Loaas				payers?	
Samuel Osborne	119	Traffic	d	The paved roads are not designed to take such abuse from a high traffic volume.	Section III.11
Tommy Buchholz	136	Traffic	d	Unless Lake Helena Dr. is rebuilt to higher standards they will destroy it.	Section III.11
David Schnittgen	148	Traffic	d	The bridges were not built for heavy trucks.	Section III.11
Kathy Burlinson	6	Traffic	e	I am also concerned about the truck traffic by Eastgate school.	Section III.11
Glenna Kendall	35	Traffic	e	How will the heavy hauling trucks be able to stop when a school child darts out into Lake Helena Dr?	Section III.11
Eastgate II Homeowners Assoc./ Alex Ostberg	77	Traffic	e	With Eastgate Elementary being right there on Lake Helena Dr. it is hard to imagine the impact that 20,000+ trucks annually will related to the school. Lake Helena is already somewhat congested.	Section III.11
Bob Burke	97	Traffic	e	Traffic is already congested during the drop off and pickup at the entrance of Eastgate School due to parents and buses.	Section III.11
Jim and Michelle Schweyen	115	Traffic	e	Concern with the trucks driving by the school especially during drop off and pickup times.	Section III.11
Susan Spotorno and Sandra Milsten	145	Traffic	e	Dangerous for children to be walking to and from school.	Section III.11
Kathy Burlinson	6	Vegetation		This will increase the spread of noxious weeds on my property.	Section III.4
Dave Swanson	84	Vegetation		What is the weed control plan for a disturbance of this size?	Section III.4
Mike Renney	103	Vegetation		What is HS&G going to do to control the weeds and possible grass fires on the proposed property if they do not let cattle graze on the property?	Section III.4
Bryan & Joan Lewis	1	Water Quality	a	Devastating effect to the quality.	Section III.2
Bill and Yvonne	5	Water Quality	a	We have concerns about water contamination.	Section III.2
Jare Holbert	7	Water Quality	a	Anything that could potentially cause water quality to go down shouldn't even be an option.	Section III.2
Lewis & Clark County Water Quality Protection District	39	Water Quality	a	Any contaminants in the wastewater stored in these ponds are likely to be absorbed to soil particles and potentially contribute to groundwater contamination for long term if left in place.	Section III.2
Lewis & Clark County Water Quality Protection District	39	Water Quality	a	Since the settling ponds are intended to discharge to groundwater, shouldn't a groundwater discharge permit by DEQ be necessary for this operation?	Section III.2
Kathy Moore	47	Water Quality	a	How will the trucks and mixers be rinsed out? Where will HS&G dump the rinsate?	Section III.2
Kathy Moore	47	Water Quality	a	What chemicals are added to concrete and asphalt that will travel with the rinsate into the settling pond and into the groundwater? Is the rinsate treated? If the rinsate is used for dust suppression will it leave heavy metals behind in soils that can become airborne?	Section III.2
William and Lisa Durbin	51	Water Quality	a	Concerned with the potential impact to the quality of water from our well.	Section III.2
Jim Skinner	64	Water Quality	a	The EA provided no analysis of the potential water quality impacts associated with the proposed excavation to within 5-feet of the seasonal high water level.	Section III.2

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
Maxine Mougeot	69	Water Quality	a	My well is 100 ft down and the city of East Helena well is not far from the berm. Are we safe?	Section III.2
Cory Mabry	72	Water Quality	a	Consider that the home owners in that area deserve clean and safe drinking water.	Section III.2
Pamela Bucy	74	Water Quality	a	Potential for impacts to the groundwater.	Section III.2
Victor and Jonett Berg	96	Water Quality	a	Concerns of water quality.	Section III.2
John and Joyce Yager	125	Water Quality	a	Concerns of water pollution.	Section III.2
Steve Lindberg	128	Water Quality	a	Proposed inadequate separation between the finished ground level and the groundwater level.	Section III.2
Bill and Judy Schwyer	137	Water Quality	a	Opposed, due to water quality.	Section III.2
Robert Roddy	143	Water Quality	a	Water quality needs to be considered and addressed.	Section III.2
Shelley Jucan	144	Water Quality	a	EA fails to disclose the impacts the water quality in this area.	Section III.2
Shelley Jucan	144	Water Quality	a	Permitting based on the EA as it currently reads will basically be placing soils on only a 5 ft filtration layer as opposed to the existing 45 ft.	Section III.2
David Schnittgen	148	Water Quality	a	The cleaning of the concrete trucks should be in a lined area. Concrete pollution of the water table is a large concern.	Section III.2
Great West Engineering / Bob Church	2	Water Quality	b	The EA also does not address whether heavy metals may potentially impact Eastgate's wastewater treatment lagoons.	Section III.2
Debra McLarnon	4	Water Quality	b	My concern is moving the topsoil with lead contaminants closer to the water source. Potentially contaminate the water.	Section III.2
Debra McLarnon	4	Water Quality	b	If the water is found contaminated who is going to be responsible for cleaning it up?	Section III.2
Debra McLarnon	4	Water Quality	b	Who is going to buy all of the water for those affected while the problem is getting fixed	Section III.2
Debra McLarnon	4	Water Quality	b	How long could HS&G tie up the issue in court stating that it was not them? How long would it take to clean up the mess?	Section III.2 Beyond the Scope of the EA
Debra McLarnon	4	Water Quality	b	How long will people have to drink water until someone gets sick, thus leading to an investigation finding the water contaminated?	Section 111.2 Beyond the Scope of the EA
James & Candace Wilbur	9	Water Quality	b	Contamination of the aquifer would be a tremendous impact to hundreds if not thousands of residents who depend on drinking water from this groundwater source.	Section III.2
Eastgate Village Water & Sewer Association, Inc./Paul Johnson	10	Water Quality	b	Should HS&G increase the amount of groundwater consumed in the area (via development of more wells), it is possible that contaminated water could be drawn toward the development (from the east Helena area) thus resulting in the contamination of existing wells in the area.	Section III.2
Kim Kuderna	15	Water Quality	b	The potential exists for the contamination of the groundwater.	Section III.2

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
Dave White	24	Water Quality	b	Recommend that contaminated top soil not be allowed to be placed within range of the water supply.	Section III.2
Joseph Nye	26	Water Quality	b	Issue that needs to be further explored is the impact of this operation, and the water use they intend may have on the existing contamination plume and any potential increase in risk that may arise.	Section III.2
Joseph Nye	26	Water Quality	b	A full analysis of the soil to be placed for reclamation be conducted to determine if any harmful chemicals may leach into the water supply.	Section III.2
Ona Lepard	31	Water Quality	b	Water will stand in this hole and contaminants will leach into the groundwater.	Section III.2
Glenna Kendall	35	Water Quality	b	Concern of deadly chemicals infiltrating our water systems.	Section III.2
Shannon Fleetwood	38	Water Quality	b	At some point the operation will reach the water table, at this point any contamination at the pit site will contaminate area wells. Are there rules to prevent this?	Section III.2
Shannon Fleetwood	38	Water Quality	b	Concerned about the ASARCO contamination of groundwater around this area if so much water is required to run this pit.	Section III.2
Lewis & Clark County Water Quality Protection District	39	Water Quality	b	Would be expected that groundwater would be exposed in the bottom of this pit. Direct exposure of the groundwater has the potential for degradation of water quality for the aquifer and has not been analyzed as a potential impact by DEQ.	Section III.2
Steven Goodrich	42	Water Quality	b	Pulling that much water from the ground will intensify and redirect the toxic plume that is expanding in the East Helena area.	Section III.2
Abigail Hulme	56	Water Quality	b	Concerned that returning the contaminated soil to the operation's pit once operations cease will put the local water supply at risk.	Section III.2
Cliff Neiffer	59	Water Quality	b	Arsenic plume under East Helena being drawn to Eastgate wells because of the use of water from the wells by HS&G.	Section III.2
Cliff Neiffer	59	Water Quality	b	Eastgate water having to be responsible for any contaminated water due to the gravel pit.	Section III.2
John Johnson	75	Water Quality	b	I fear that the pulling of an additional 71 million gallons/year of water out of the ground north of the existing arsenic plume will increase the plume's movement in my direction.	Section III.2
John Johnson	75	Water Quality	b	Environmental concerns about using arsenic tainted water in the production of concrete and asphalt	Section III.2
John Johnson	75	Water Quality	b	HS&G plans to dig down to 40' in an area where the only groundwater depth test has documented water is 45'. This is cutting it too close.	Section III.2
Ross Campbell	76	Water Quality	b	Concerned about groundwater contamination.	Section III.2
Eastgate II Homeowners Assoc./ Alex Ostberg	77	Water Quality	b	Contaminated soil will be moved so that it is 5 feet above the aquifer rather than 45 feet above the aquifer. What are the hazards surrounding leaching into the aquifer?	Section III.2
Brian Connolly	79	Water Quality	b	Concerns of groundwater contamination.	Section III.2
Karen Lindquist	88	Water Quality	b	The potential for water contamination is ever present with this type of activity.	Section III.2
Bob Burke	97	Water	b	With arsenic found in wells west of the area, has there	Section III.2

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
		Quality		been any study done to determine how this may affect further wells surrounding the site?	
Bob Burke	97	Water Quality	b	With the contaminated soil being removed and stored for reclamation, when the soil is placed back at the bottom of the pit, contaminants will enter the aquifer because the bottom of the pit will be within 5 feet of the high water table.	Section III.2
Mark Scherer	101	Water Quality	b	Concerned about water contamination from this project, and the existing plume from ASARCO.	Section III.2
Mike Renney	103	Water Quality	b	How will they keep our water table from getting contaminated? More studies need to be done.	Section III.2
Thomas A Mendyke	109	Water Quality	b	The spread of arsenic into the aquifer wasn't considered with any scientific data or projections.	Section III.2
Jim and Michelle Schweyen	115	Water Quality	b	Possible contamination of our water.	Section III.2
Steve Lindberg	128	Water Quality	b	Study needs to be complete before considering placing contaminated materials back over the excavated area with the aquifer so near to the new surface removal operation, the levels would remain a major concern.	Section III.2
Shelley Jucan	144	Water Quality	b	It was stated that lead and arsenic contaminants are typically found in the top 6-12 inches of soil. Will these contaminants infiltrate?	Section III.2
Shelley Jucan	144	Water Quality	b	What needs to be further explored is the impact this operation and the water use they intend may have on the existing contamination plume and any potential increase in risk that may arise from said activity.	Section III.2
Susan Spotorno and Sandra Milsten	145	Water Quality	b	Water contamination is a threat.	Section III.2
David Schnittgen	148	Water Quality	b	Prickly Pear has elevated lead, arsenic, and other heavy metal contamination. Introducing this water into a gravel pit is very disturbing. The threat to the water table is greatly increased.	Section III.2
James & Candace Wilbur	9	Water Quality	c	No analysis of the potential for groundwater quality impacts are provided in the EA. No baseline data has been collected on aquifer water quality and no monitoring plans for water quality are even mentioned in this document.	Section III.2
Kathy Moore	47	Water Quality	c	Where is the baseline water quality information that will allow local residents to evaluate the impact of this new proposed activity on their sole source of drinking water? Request that DEQ require enough baseline information to get an accurate picture of groundwater levels and typical fluctuations within Sections 19 and 30 prior to issuing a permit.	Section III.2
Joseph Nye	26	Water Quality	c	Regardless of mitigation measures, some type of monitoring system must be in place to make sure operations are not impacting the water quality.	Section III.2
Lewis & Clark County Water Quality Protection District	39	Water Quality	c	Monitoring program needs to establish a baseline of non-impacted groundwater prior to permitted activities threatening contamination. Request a one year period of sampling of groundwater and water levels prior to any implementation of the planned excavation of the pit to establish that baseline.	Section III.2
Kathy Moore	47	Water Quality	c	DEQ also has authority to require on-and-off site surface water and groundwater quality and quantity	Section III.2

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
				monitoring before, during and after open cut operations.	
Mike Sedlock	105	Water Quality	c	I feel that wells along the border of HS&G property be tested at least twice a year by an outside source at the expense of HS&G to ensure that contamination is not affecting prior water users in the area and monitoring should be perpetual.	Section III.2
Shelley Jucan	144	Water Quality	c	Install some type of monitoring system to identify any impacts associated to this operation with the water quality	Section III.2
Joseph Nye	26	Water Quality	d	At the public meeting HS&G stated they would be bringing in a cold millings into the site to be used for recycled pavements. No where in the EA was the storage of this material discussed.	Section III.2
Lewis & Clark County Water Quality Protection District	39	Water Quality	e	Stormwater from the industrial site would also be managed on on-site according to the EA although it is unclear how this water would be managed.	Section III.2
Lewis & Clark County Water Quality Protection District	39	Water Quality	e	On-site storage and use of fuels, solvents, asphaltic liquids, and other industrial chemicals for the proposed facility, create the potential for these pollutants to enter these ponds and the aquifer. Sediments, metals, and other normal pollutants in the site will enter the water ponds from stormwater runoff. This area has elevated levels of lead, arsenic, and cadmium in the topsoil. These heavy metals threaten groundwater contamination.	Section III.2
East Helena Lead Education and Abatement Program / Jan Williams	65	Water Quality	e	The LEAP also feels that the stormwater that will be collected and reused should be sampled before reuse.	Section III.2
Kathy Moore	47	Water Quality	f	Does the DEQ have any way of enforcing the protection of groundwater quality, or will it issue a violation notice and collect a penalty as a means of enforcement? How will this protect my health?	Section III.2
Kathy Moore	47	Water Quality	f	What is the typical usage of salt at the existing Canyon Ferry Site? Magnesium chloride is applied to stock piles to keep them from freezing and on roads to de-ice. How many tons of salt will this operation use?	Section III.2
Bryan & Joan Lewis	1	Water Quantity	a	Worried about the quantity of household water.	Section III.2
Pat Helven	3	Water Quantity	a	I have concerns about groundwater.	Section III.2
Debra McLarnon	4	Water Quantity	a	We are already restricted on watering. If we are having problems here, the other neighborhoods are probably experiencing the same issues.	Section III.2
Ona Lepard	31	Water Quantity	a	It will need to be sprayed almost continuously with water, especially if the wind is blowing. This will place additional stress on water levels.	Section III.2
Ona Lepard	31	Water Quantity	a	Concerned about the current lack of water available due to drought conditions. HS&G's consumption will impact wells throughout the area.	Section III.2

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
Kathy Moore	47	Water Quantity	a	How long will it take for sediment to build on the bottom of the settling pond to stop the water from infiltrating directly into the ground, thus allowing HS&G to build up this supply? Since the soils are cobbles and sand, it could take several years. In the meantime, this water will be drawn from the ground.	Section III.2
Kathy Moore	47	Water Quantity	a	It is unclear what flood irrigation is occurring anywhere near this site. This information is misleading and inaccurate and should be withdrawn from the EA.	Section III.12
William and Lisa Durbin	51	Water Quantity	a	Concerned with the potential impact to the availability of water from our well.	Section III.2
Ross Campbell	76	Water Quantity	a	The groundwater supply is a concern that is high on my list.	Section III.2
Brian Connolly	79	Water Quantity	a	Increased demand on the aquifer.	Section III.2
Dave Swanson	84	Water Quantity	a	If dewatering is required at depth, where will the water be routed to?	Section III.2
Victor and Jonett Berg	96	Water Quantity	a	Concerns of water availability.	Section III.2
Mark Scherer	101	Water Quantity	a	Concerned about water depletion.	Section III.2
Brian and Julie Loaas	114	Water Quantity	a	Please do not let them come and overuse and contaminate our water.	Section III.2
Samuel Osborne	119	Water Quantity	a	I believe that the water evaporation was not taken in consideration, sure they are going to recycle some of the water but if you refer to a chart designed for irrigation purposes it will tell you how much water will evaporate from the pits and ground per day depending on the temperature and wind variables.	Section III.2
Bill and Judy Schwyer	137	Water Quantity	a	Opposed due to water quantity.	Section III.2
Eastgate Village Water & Sewer Association, Inc./Paul Johnson	10	Water Quantity	a	Should this site be impacted by the gravel pit (via contamination or dewatering), it could deliver a death blow to Eastgate's ability to deliver water to its residents.	Section III.2
Mike & Jean Riley	11	Water Quantity	a	There is no discussion on the impacts to these wells for La Casa Grade subdivision.	Section III.2
Charles & Carol Aumell	20	Water Quantity	a	The aquifer in this area is being depleted from existing wells and drought.	Section III.2
Laverne Hravirland	21	Water Quantity	a	Water levels go down.	Section III.2
Vicki Hewitt	25	Water Quantity	a	We are in a drought situation and can't afford to have water tables lowered.	Section III.2
William B. Covey	49	Water Quantity	a	I fully expect that the static level will drop significantly and highly probable I will have another dry well.	Section III.2
Dave Sedlock	58	Water Quantity	a	I am concerned with my water, how will this affect my well?	Section III.2
Bruce Desonia	61	Water Quantity	a	Concerned about what effect the proposed gravel pit will have on local water tables. Operation of this nearby gravel pit will only further lower water table and probably force me to have to drill a new well on my property at my expense.	Section III.2
Tim and Leslie Brandt	71	Water Quantity	a	Concerned about water as we are on a well. If HS&G is to pull from the ground table above us and not be metered to control their usage who is to say they wont dry up our underground stream and cause wells in our	Section III.2

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
				area to dry up ?	
Mike Renney	103	Water Quantity	a	Where is this proposed open pit mine going to get the mass amount of water for this operation? If they use the wells, how will they keep the water level from dropping the level of the water table in this area?	Section III.2
Manley Stallings	111	Water Quantity	a	Is this going to affect the water supply of all homeowners in the area?	Section III.2
Brenda Thomas	126	Water Quantity	a	What will happen to the water levels in the area.	Section III.2
Becky Weinger	133	Water Quantity	a	Make sure there is adequate water supply.	Section III.2
Robert Roddy	143	Water Quantity	a	Also Concerned about the use of water affecting our community wells and the productivity.	Section III.2
Eastgate Village Water & Sewer Association, Inc./Paul Johnson	10	Water Quantity	a	It would seem likely that HS&G would use this water right to mitigate (formerly augment) a new well (or set of wells) on their property. Should HS&G go this route, they would most assuredly meet with objections from adjacent landowners (including Eastgate). Given that it currently takes 18 months to resolve objections, that leaves HS&G without additional well water for about 2 years.	Section III.2
Eastgate Village Water & Sewer Association, Inc./Paul Johnson	10	Water Quantity	a	Helena valley Irrigation canal would also not be a reliable source for water due to seasonal operations.	Section III.2
Vicki Hewitt	25	Water Quantity	a	If they get water from irrigated canal what happens in the winter when they are bone dry	Section III.2
Glenna Kendall	35	Water Quantity	a	There are problems with water availability now, where do they think they will have enough water to run their mine operation without affecting the water level of all of the home owners in this area?	Section III.2
Lewis & Clark County Water Quality Protection District	39	Water Quantity	a	As the primary supplier of water a clear understanding of this ditch location and its ability to deliver water to the facility is necessary for an accurate analysis of impacts by DEQ.	Section III.2
Lewis & Clark County Water Quality Protection District	39	Water Quantity	a	The amount of water under these rights could not supply more then 1100 AF per year. The transferability of these rights from historic use for flood irrigation and timing of that use to this proposed industrial use is also questionable.	Section III.2
Lewis & Clark County Water Quality Protection District	39	Water Quantity	a	When totaling the available supplies of water, in no way can the projected 700 million + gallons of water needed annually to operate be available for this project.	Section III.2
Grandview HOA/Michael Sedlock and Clifford Smith	44	Water Quantity	a	Many of the wells in this area were drilled in the 70's and 80's at less than 100 feet. A fair number of these wells have already had to be re-drilled due to the increased number of homes needing wells.	Section III.2
Kathy Moore	47	Water Quantity	a	The HS&G plans to use 4 on-site wells and their strategy to obtain "exempt" water rights for wells 35 gpm, not to exceed 10 acre feet per year, is a clear attempt to avoid more stringent review for greater water use.	Section III.2

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
Kathy Moore	47	Water Quantity	a	They have not indentified adequately, legally available water sources for their operation.	Section III.2
Jim Skinner	64	Water Quantity	a	It is misleading to the community and HS&G for the state to recommend an action without taking the impacts associated with this need into account. To do so may allow HS&G to move forward with a considerable capital expenditure on initial site improvements that may be fruitless if an acceptable water source is not identified in the future, and does not provide the community and individual well owners in the area any level of analysis, impact identification or mitigation with the environmental process.	Section III.2
Bob Burke	97	Water Quantity	a	Prickly Pear Creek is dry during parts of the season but the EA indicates it's a permanent water source. How can HS&G depend on this water from April 15th to Oct 15th?	Section III.2
Manley Stallings	111	Water Quantity	a	There is water that could be used by them that could come from the regulating reservoir with effort on their part to get some water from that water district.	Section III.2
Shirley A Thennis	112	Water Quantity	a	There should be no consideration to give HS&G a permit to use water for anything but residential use.	Section III.2
James & Candace Wilbur	9	Water Quantity	a	During the public meeting Scott Olsen stated that HS&G calculated that 8.8 million gallons a year will be "consumed" by being incorporated in their products of concrete and asphalt and will leave the site. The analysis if this section is totally inadequate in light of this statement and requires a new EA or higher level of analysis.	Section III.2
Eastgate Village Water & Sewer Association, Inc./Paul Johnson	10	Water Quantity	a	There just does not seem to be any viable way to get 2,000 gpm of water from the ground at this site. Even if there were, it would most definitely have a significant impact on surrounding wells and therefore would not be an option.	Section III.2
Carla Sturn	17	Water Quantity	a	Amount of water use sounds extreme.	Section III.2
Shannon Fleetwood	38	Water Quantity	a	How much water is needed to run the pit and how that will affect all the well water required for this area?	Section III.2
Lewis & Clark County Water Quality Protection District	39	Water Quantity	a	No mention of the amount of water necessary for dust control or irrigation.	Section III.2
Steven Goodrich	42	Water Quantity	a	Water requirements are huge. The proposal intentionally minimized the impact by spreading the source of the water supply to a number of small wells and claiming the water will mostly come from water sources that will often be empty.	Section III.2
Grandview HOA/Michael Sedlock and Clifford Smith	44	Water Quantity	a	711 million gallons of water per year cannot be considered a "slight increase".	Section III.2
Kathy Moore	47	Water Quantity	a	EA should be revised to present a clearer discussion of how much water will actually be withdrawn on a daily basis.	Section III.2
Det Meskimen	48	Water Quantity	a	What happens when the company needs additional water to run its operation? Do we go without when our wells do dry?	Section III.2

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
John Johnson	75	Water Quantity	a	HS&G states the four existing wells on the property will serve their needs but that other less biased (more knowledgeable) individuals state that HS&G is underestimating their water needs by 71 million gallons per year.	Section III.2
Anita Lincoln	99	Water Quantity	a	How many wells do they have to drill to have the water they need? They said 4-5 in the EA which works out to over 75 million gallons. Why do they need 4-5 wells if they only use 8 million?	Section III.2
John and Joyce Yager	125	Water Quantity	a	Concerns of water usage.	Section III.2
Great West Engineering / Bob Church	2	Water Quantity	a	Since DEQ has not outlined their water source, I do not feel that the DEQ can adequately determine the impacts to water resources in the area. DEQ should require a detailed plan for the water supply as part of either a more detailed EA or as a permit condition.	Section III.2
Natalia Rogers	8	Water Quantity	a	I am concerned that HS&G might be able to use loop-holes to avoid having to gain a water permit for the property.	Section III.2
James & Candace Wilbur	9	Water Quantity	a	The EA makes the statement that the Stockburger Ditch "runs adjacent to the Helena Valley Canal" and Figure 1 shows the ditch running parallel to the canal. This is an error since the Stockburger Ditch formerly transected the site from the southwest to the northeast. The ditch is no longer physically functional and according to the June 1957 Water Resource Survey published by the State Engineers Office, the small parcel of land that was irrigated on the property was supplied by water from the Grandy Ditch. According to the Water Commissioner for Prickly Pear Creek this land parcel has not had irrigation water delivered for crop irrigation in over twenty years. It is unlikely the Prickly Pear Creek water rights that are associated with the property could deliver any significant amounts of dependable water to this site. HS&G would need to apply for and obtain a water right for this large groundwater use from one or more production wells.	Section III.2
Eastgate Village Water & Sewer Association, Inc./Paul Johnson	10	Water Quantity	a	While the EA mentions the Stockburger Ditch prominently, you will not find any evidence of such a ditch (or any other conveyance) in existence today. There is no way to get water from Prickly Pear Creek to the HS&G property at this time. If the ditch (or some other conveyance) did exist, it would be seasonal at best and likely unusable in times of low water. It would hardly be a reliable source of water for a sustained gravel operation.	Section III.2
David Schnittgen	148	Water Quantity	a	Currently the Stockburger Ditch is unusable.	Section III.2
Lewis & Clark County Water Quality Protection District	39	Water Quantity	b	This area has experienced drought conditions in the last 7 to 8 years. This climatic interval could be depressing the currently measured static water levels at this site. There has not been appropriate research or analyzing of the impacts of the plan of operations that are likely to affect the groundwater aquifer.	Section III.2
Debra McLarnon	4	Water Quantity	b	There are some discrepancies of the starting depth of the water table.	Section III.2

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
Bill and Yvonne	5	Water Quantity	b	We think they should pursue more studies regarding the water table.	Section III.2
James & Candace Wilbur	9	Water Quantity	b	Any review of water levels measurement in nearby wells shows seasonal water level fluctuation of 12 to 15 feet north of the site and as much as 60 feet south of the site with the highest water level measurements in the summer.	Section III.2
Mike & Jean Riley	11	Water Quantity	b	The EA states that 45 feet is the low water table level and high water table level. It cannot be both.	Section III.2
Miles and Rita Watson	117	Water Quantity	b	It has been determined that the groundwater level is at 45 feet as stated in the article in the Independent Record. This seems strange considering that our first water was at 30 feet in our well drilling.	Section III.2
Natalia Rogers	8	Water Quantity	b	One month of data in 2006 is not adequate enough to determine where the water level actually is.	Section III.2
James & Candace Wilbur	9	Water Quantity	b	A hydro geologic study of the site should be conducted to determine the availability of sufficient quantities of groundwater and the impacts of withdrawals of large amounts of water from the local aquifer.	Section III.2
Christopher Jones	55	Water Quantity	b	One month's worth of information from one well does not seem fitting to determine the varying elevation of groundwater.	Section III.2
Abigail Hulme	56	Water Quantity	b	Question whether an assessment of the impact on local water tables of digging to the depth of 40 ft is sufficient based on information obtained from a single point in time study of the community's water table.	Section III.2
Larry E Renney	60	Water Quantity	b	There is no baseline data on high and low water table levels. 1 month of data is not enough to establish this.	Section III.2
Pamela Bucy	74	Water Quantity	b	A truer picture of the high water table should be established prior to determining that there will be no impacts to groundwater associated with the gravel pit operations.	Section III.2
Mike Sedlock	105	Water Quantity	b	The EA only contains one month of data relating to the water table which is very unconvincing, it should be monitored for a min. of 1 year and preferably for 3 years. I anticipate that it will have an affect on my well and require that I drill a new well.	Section III.2
Thomas A Mendyke	109	Water Quantity	b	Digging the pit to 40 feet deep in an area where the guessed at high water level is 45 feet below the surface must be an error.	Section III.2
Thomas A Mendyke	109	Water Quantity	b	One month of percolation data taken during the dry month of Feb. to support the 40 foot mine depth must be wrong.	Section III.2
Angela Jones	123	Water Quantity	b	One month's worth of information from one well does not seem fitting to determine the varying elevation of groundwater.	Section III.2
Steve Lindberg	128	Water Quantity	b	There had been no ongoing assessment of the water level to accurately log the groundwater levels on the property	Section III.2
Tommy Buchholz	136	Water Quantity	b	The one water level test done if Feb. does not give an actual picture.	Section III.2
Shelley Jucan	144	Water Quantity	b	What data was the ordinary high water elevation based on?	Section III.2

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
William and Lisa Durbin	51	Water Quantity	b	Request that a monitoring plan be incorporated into the environmental document to ensure that production does not affect the levels of the water table or the quality of the water in the aquifer.	Section III.2
Jim Skinner	64	Water Quantity	b	With the uncertainty of the seasonal water level, and considering that the seasonal high water levels based on the EA monitoring plan will not be established prior to initiating operations, how will DEQ or HS&G ensure that they don't excavate beyond the seasonal high water level during the winter? The EA should require on-site monitoring to establish the appropriate depth of mining prior to any excavation.	Section III.2
John Johnson	75	Water Quantity	b	HS&G needs to be strictly limited and monitored for water use.	Section III.2
Kathy Burlinson	6	Water Quantity	c	There will be increased water use in the E.H. Valley, what is proposed by the HS&G if my well goes dry? Am I the one who will have to drill a new well?	Section III.2
Grandview HOA/Michael Sedlock and Clifford Smith	44	Water Quantity	c	When HS&G starts using their wells, I along with many other residents will probably have to drill deeper wells, who is going to pay for that?	Section III.2
Kevin Kauska	46	Water Quantity	c	What is the plan when HS&G's wells run dry? Would like to see an iron clad contract stating that the water levels and availability for the LaCasa Grande Subdivision will never be impacted.	Section III.2
Ryan Williams	14	Water Quantity	c	What will happen when our wells go dry?	Section III.2
Eastgate II Homeowners Assoc./Alex Ostberg	77	Water Quantity	c	If wells start drying up HS&G should have to prove that those wells drying up were not caused by how much they pump out of their wells.	Section III.2
Bob Burke	97	Water Quantity	c	If HS&G uses millions of gallons of water, how will this affect the quality and quantity of my water? Will HS&G pay to have a new well drilled if it's affected by the pit?	Section III.2
Will Tangen	122	Water Quantity	c	HS&G will require large amounts of water they must be held responsible for any damages that may occur to Eastgate's wells. More studies need to be done.	Section III.2
Viola Zindell	146	Water Quantity	c	Concerned about the groundwater impact, if wells start to dry up can we stop the operation of the pit in order to preserve our water rights?	Section III.2
Miles and Rita Watson	117	Water Quantity	c	Do they have to abide by the water rights we have filed for and now pay for?	Section III.2
Joseph Nye	26	Water Quantity	e	It was not clear in the EA what data the ordinary high water elevation was based on. Proposed operations planned to occur as close as 5 feet of this elevation, guidance needs to be set as to what changes will be required for operation requirements should the elevation be found an error.	Section III.2
Pat Helven	3	Wildlife		Impacts to wildlife habitat.	Section III.5
James & Candace Wilbur	9	Wildlife		The EA makes no mention of the migratory birds that inhabit this area and utilize this site during their visits to this area.	Section III.5
Shelley Jucan	144	Wildlife		The Natural Heritage program shows Bobolink and Bald Eagles present. This area is suitable habitat for the Bobolink.	Section III.5

Respondent Name	Resp. ID#	Topic	Sub-comment	Summary of Comment PBSJ:	Comment Addressed in EA
Shelley Jucan	144	Wildlife		Mule Deer, elk, upland game birds, and even moose have been observed in this 400 acre parcel, the EA does not address the habitat that exists there.	Section III.5
David Schnittgen	148	Wildlife		Since this area is bounded by canal on one side and roads on 3 sides the possibility of these creatures being run over is very real.	Section III.5

ATTACHMENT 3

DUST MITIGATION PLAN



HELENA
SAND & GRAVEL

LAKE HELENA DRIVE PIT DUST MITIGATION PLAN

INTRODUCTION & PURPOSE

Helena Sand & Gravel, Inc. (HSG) has filed an Open Cut Mining Permit Application with the Montana Department of Environmental Quality (MDEQ), to excavate pitrun sand and gravel from a site located at 2802 Lake Helena Drive. The legal description for the property is the SE¼, and the E½ of the SW¼, NW¼ of the SW¼, and the S½ of the NW¼ of Section 19, T10N, R2W, Lewis & Clark County, Montana. The site had been previously determined to have been contaminated with heavy metals (lead, arsenic & cadmium) by ASARCO, as a result of former operations at the East Helena Lead Smelter.

HSG has contracted with Tetra-Tech, Inc. to perform soil surveys to characterize the level(s) of contamination in the topsoil within our property and permit boundaries. The first survey, which consisted of obtaining soil samples from locations identified by the MDEQ Superfund Program & the East Helena Lead Program, was summarized in a report dated November 2, 2007. Twenty samples were collected from within the property boundary of the site, three of which were located in the permit area. The second survey will consist of obtaining representative soil samples from every other acre of the permit area, and additional samples from several of the ditches in located in the permit area.

Prior to commencement of excavation activities required for the sand & gravel operation(s), the topsoil must be removed from the area and stockpiled onsite for future reclamation purposes. The following Dust Mitigation Plan will be utilized by HSG prior to and throughout the stripping activities at the Lake Helena Drive Pit. The plan is separated into the various potential dust generating activities or locations, foreseen by HSG. Those areas identified by HSG personnel as a likelihood of generating dust are as follows:

1. **Stripping Operation** – removal, transportation and stockpiling of topsoil to access the aggregate reserve area(s).
2. **Entrance/Major Access Road(s)** – those roads which HSG will use to access the pit entrance, Lake Helena Drive, or the separate plant locations that will be paved.

3. **Minor Access/Haul Road(s)** – those roads which HSG will use to access material stockpiles, inter facility or mining/stripping haul roads that will not be paved.

MITIGATION PLAN

Stripping Operation

In order for HSG to excavate the available aggregate, the topsoil will need to be stripped and stockpiled. The steps outlined below detail the procedure HSG will employ to mitigate dust and accomplish the stripping operation safely, efficiently and minimizing the generation of dust.

1. At least one day prior to commencement of scheduled stripping activities, water will be spray applied to the area to be stripped. Water will be applied with a construction water truck. We anticipate two scrapers working 10 hours/day will strip 3.5 to 4 acres per day.
2. HSG will commence stripping operations only when the following weather conditions apply.
 - a. The ambient air temperature will be 35°F and rising, to insure water applied for dust mitigation is effective and not wasted due to freezing weather.
 - b. The wind speed is less than 15 mph, as determined by the weather station located at the Helena Regional Airport (www.weather.com), thus mitigating wind blown dust potential.
3. Once it is determined weather conditions are within the requirements outlined above, stripping operations will be performed with various mobile, off road equipment such as, but not limited to, scrapers, backhoes, motor graders, & water truck(s). Additional water will be applied with construction water truck(s), during the stripping activities.
4. In areas where topsoil is to be removed from ditches, HSG will utilize a backhoe or excavator to excavate the topsoil, instead of removing with a scraper or other mobile off road equipment.
5. The excavated topsoil will be transported and stockpiled in the designated stockpile area(s) located, as shown in the Plan of Operations.
 - a. During this portion of the operation, HSG will mitigate dust by utilizing water truck(s) to maintain both designated haul roads (not paved) and the affected stripping/stockpile locations.

- b. HSG will designate haul roads to be used, thus mitigating dust by limiting the disturbed ground and localizing mitigation efforts to a minimized area. To the extent HSG is able due to operational constraints, these haul roads will be utilized throughout the stripping operation(s) for the entire permit area.
 - c. At the stockpile location, HSG will begin to construct a visual and sound buffer berm. During stockpiling, HSG will mitigate any dust generated by the stockpiling operation by the use of water truck(s).
 - d. Once the stripping operation is completed, HSG will maintain sufficient moisture in the berm until the installation and stabilization of native seeding/landscaping. In order to maximize vegetation growth potential, growth rate, while minimizing the wind-blown dust potential from the topsoil stockpile(s), HSG will utilize hydroseeding methods of planting the topsoil cover crop.
6. The stripping operation outlined above will occur during various intervals, throughout the life of the facility. The berm's construction will follow this same time frame. Construction of the berm will be in sections, so as not to disturb the previous constructed area and subsequent landscaping. This segmental approach to the berm's construction will mitigate dust by focusing activities in one localized area.

OPERATING MITIGATION PLAN

Entrance/Major Access Road(s)

HSG will mitigate dust on all entrance and major access road(s) by paving these preplanned routes, in accordance with the Plan of Operations. All paved routes will also be maintained by utilizing self-powered construction broom sweeper(s). The combination of pavement and the broom(s) will mitigate potential dust from these roads.

Minor Access/Haul Road(s)

The minor access and haul road(s) will be constructed of either road gravel or pit run. HSG will mitigate dust on these roads by utilizing water truck(s) on a daily basis. Throughout any given day, the frequency of water truck(s) usage will vary based on wind and temperature conditions.

ATTACHMENT 4

**WORK PLAN FOR MONITORING WELL INSTALLATION AND ROUTINE MONITORING
GROUNDWATER SAMPLING AND ANALYSIS & CONTAMINANT DETECTION RESPONSE PLAN**



TETRA TECH

January 31, 2008

Mr. Jerry Bowser
Helena Sand and Gravel
PO Box 5960
Helena, Montana 59604

RE: **Work Plan and Cost Estimate
Monitoring Well Installation and Routine Monitoring
Lake Helena Drive Pit, East Helena, Montana**

Dear Mr. Bowser:

Tetra Tech, Inc. (Tetra Tech) has prepared this work plan for the well installation and monitoring at the proposed Helena Sand and Gravel (HS&G) pit located between valley Drive and Lake Helena Drive immediately south of the Helena Valley Irrigation Canal in East Helena, Montana (Figure 1). The location is known as the Lake Helena Drive Pit (site). This Workplan will commence upon Montana Department of Environmental Quality (MDEQ) approval of the site Groundwater Sampling and Analysis Plan dated January 31, 2008. This work plan presents objectives, scope of work, anticipated schedule and estimated costs.

OBJECTIVES

The objectives of the well installation and groundwater-monitoring program at the above mentioned site are to:

- Install a total of five groundwater monitoring wells along the south and north perimeter of the property;
- Document baseline groundwater quality, elevation, gradient, and flow direction prior to active gravel mining activities; and
- Conduct regular routine groundwater monitoring during active gravel mining activities to detect groundwater contaminants if present.

The scope of work for well installation and groundwater monitoring during 2008 is presented below. A location map is presented in Attachment A, and tables that summarize sample parameters and monitoring schedule are presented in Attachment B. A cost estimate is presented in Attachment C.

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SCOPE OF WORK

The scope of work has been divided into four tasks:

- 1) Task No. 1: Project Management and Administration
- 2) Task No. 2: Monitoring Well installation and Well Development
- 3) Task No. 3: Routine Groundwater Monitoring
- 4) Task No. 4: Semi-Annual Project Reporting

Details of these tasks are presented in the following sections. All measuring, sampling, packaging, shipping, and documentation will be completed in accordance with Tetra Tech's standard operating procedures, and all field activities will be conducted in accordance with a site-specific health and safety plan (HASP). Energy Laboratories, Inc. of Helena, Montana, will provide laboratory services. Tetra Tech will comply with all applicable environmental laws and regulations in accordance with the Master Services Agreement between HS&G and Tetra Tech, effective February 1, 2007.

Task No. 1: Project Management and Administration

This task consists of project management and administrative activities. These activities include preparation of this work plan and cost estimate, creating a site specific health and safety plan (HASP), planning and scheduling fieldwork, coordinating fieldwork with HS&G as needed, reviewing budgetary status, invoices and providing invoice backup, and client and/or regulatory correspondence as necessary.

Task No. 2: Monitoring Well Installation and Development

Tetra Tech proposes to install five monitoring wells at the site in accordance with the site Groundwater Sampling and Analysis Plan (SAP) dated January 31, 2008. Two monitoring wells will be installed along the south boundary and three monitoring wells will be installed along the north boundary. Figure 2, Attachment A presents the proposed monitoring well locations. This work plan and cost estimate is based on the following assumptions:

- Depth to groundwater at the site is approximately 45 feet below ground surface;
- The site boundary will be clearly marked, and site access will be provided by HS&G to allow drill rig access to each proposed well location.

Prior to drilling, Tetra Tech will mark the proposed locations with wood lath then schedule location of underground utilities using the One-Call utility locating service. Due to the anticipated presence of cobbles and boulders, an air rotary drill rig will be used to advance the boreholes to a maximum depth of 60 feet (minimum of 10 feet of water column). Air rotary methods do not allow for representative sampling for laboratory analysis or accurate lithologic logs, therefore no soil samples will be collected. Lithologic logs of each boring will be described based on periodic collection and interpretation of drill cuttings. Drill cuttings will be land applied in the vicinity of the boring.

The monitoring wells are designed to be used both for initial investigative purposes of groundwater characterization at the site and long term monitoring. Specifically, each well will be constructed of four-inch diameter schedule 40 PVC to a maximum depth of approximately 60 feet below ground surface. The bottom 20 feet will consist of 0.020 factory-slotted screen followed by solid riser and completed with an 8-inch diameter two to three foot steel protective stick up set in concrete at the ground surface. A filter pack consisting of 10-20 silica sand will extend from the bottom of the well to approximately two feet above the screen interval, followed by 3/8-inch bentonite chips to within one foot of grade, over which the steel protective cover will be set in concrete. The completed steel well casing will extend approximately two to three feet above ground surface, secured with a steel locking lid, and padlock.

Following installation, the wells will be developed by the drilling subcontractor to improve the hydraulic connection with the aquifer and remove fine grained material from the formation around the well screen. Development will consist of using a surge and bail technique to agitate the water column followed by pumping with a submersible pump. Development will continue until water removed exhibits a slightly turbid quality. All water generated during development will be land applied on site. Tetra Tech understands that surveying the location and elevation of the well casing will be the responsibility of HS&G.

Task No. 3: Routine Groundwater Monitoring

As resented in the SAP, the baseline monitoring frequency will be rigorous during the first year. For 2008, static depth to water and field water quality parameters (pH, water temperature, and specific conductance (SC)) will be measured monthly. Semi-annual groundwater sampling events will occur during the typically high and low groundwater periods for the area. These periods are typically May/June (high) and November/December (low). Select analytic parameters will only be sampled during the first year (May/June and November/December) to provide baseline conditions. Tables 1 and 2, Attachment B present the parameter list and routine monitoring schedule, respectively.

Monitoring wells will be evacuated of three casing volumes using Tetra Tech's Redi-Flow groundwater sampling system. All down-hole equipment will be decontaminated between wells by washing with a Liquinox and distilled water solution, followed by a 10% nitric acid solution (to remove dissolved metals), a 10% methanol solution (to remove volatile organic compounds), and finally a distilled water rinse. The pump will be lowered to a specific sampling depth to provide consistency in chemical data. Flow rates will be adjusted to minimize water level drawdown in the well. All sampling data for each well will be recorded on field forms. Water evacuated prior to sampling will be land applied on site.

The following physical properties, referred to as field parameters, will be periodically measured during the well evacuation process and immediately prior to collecting a sample: water temperature, pH, and SC. These parameters are used in the field to assess chemical stability prior to sampling.

Groundwater samples will be delivered to Energy Laboratories Inc. in Helena, Montana for analyses according to Table 1. Each sampling event will also include submitting one field duplicate as a measure of quality assurance. Natural and duplicate samples will be compared using relative percent difference (RPD). Specifically, the RPD is defined as the difference between the natural and duplicate results divided by the mean. Results for analytes in Table 1 are considered estimated values when the RPD for a particular analyte exceeds 20 percent (50% for volatile organic compounds). The results of any and all natural and duplicate sample analytes exceeding the RPD will be flagged with an "e" in the report indicating the results are to be considered estimates (RPD based).

Task No. 4: Project Reporting

Copies of monitoring well lithologic and construction logs will be submitted to the Department of Natural Resources and Conservation (DNRC) within 90 days of well completion as required under ARM 36.21.809. Monitoring well lithologic and completion logs will also be submitted to MDEQ as part of the first semi-annual monitoring report. Semi-annual monitoring reports will be prepared and submitted to MDEQ on behalf of HS&G. A semi-annual groundwater monitoring report will include:

- Brief letter report summarizing the methods and results for the semi-annual monitoring event including a description of sampling activities, data interpretation, and recommendations;
- Figures presenting: site location and site features;
- Tables summarizing field parameters, groundwater elevations, and analytical concentrations;
- Field notes and groundwater sampling forms; and
- Laboratory analytical reports including Chain of Custody for groundwater samples collected during the monitoring period.

In order for Tetra Tech to include groundwater elevations, potentiometric maps, and groundwater gradient, HS&G would need to provide results of the location and elevation survey completed as part of Task No. 2 above.

In addition to the above, the annual monitoring reports shall include a summary of historic data for the period of record and a discussion of trends or deviations from historic monitoring results as well as recommendations for future monitoring. One copy of the annual report will be submitted to MDEQ on behalf of HS&G.

PROJECT SCHEDULE

Depending on approval of the SAP by MDEQ, this Workplan and cost estimate by HS&G, and subcontractor availability, Tetra Tech would prefer to complete field activities as soon as possible and have all wells completed by April 30, 2008. This would allow the first sampling event to occur during late May or June which is typically the highest annual groundwater elevation for the area.

- Semi-annual groundwater monitoring will be conducted approximately every six months, beginning in late May or June (e.g., May/June and November/December).
- Semi-annual monitoring reports will be submitted to HS&G within 15 business days of receipt of final laboratory reports.

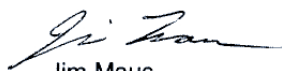
COST ESTIMATE

The estimated time and material costs for the well installation and monitoring program are attached for your review. All work and labor rates will be in accordance with the Master Services Agreement between HS&G and Tetra Tech effective February 1, 2007. Costs will not exceed those in the attached estimate without written approval from HS&G.

If this work plan and cost estimate are acceptable, please notify us and we will proceed with the tasks identified above. If you have any questions or comments, please contact me at (406) 443-5210.

Sincerely,

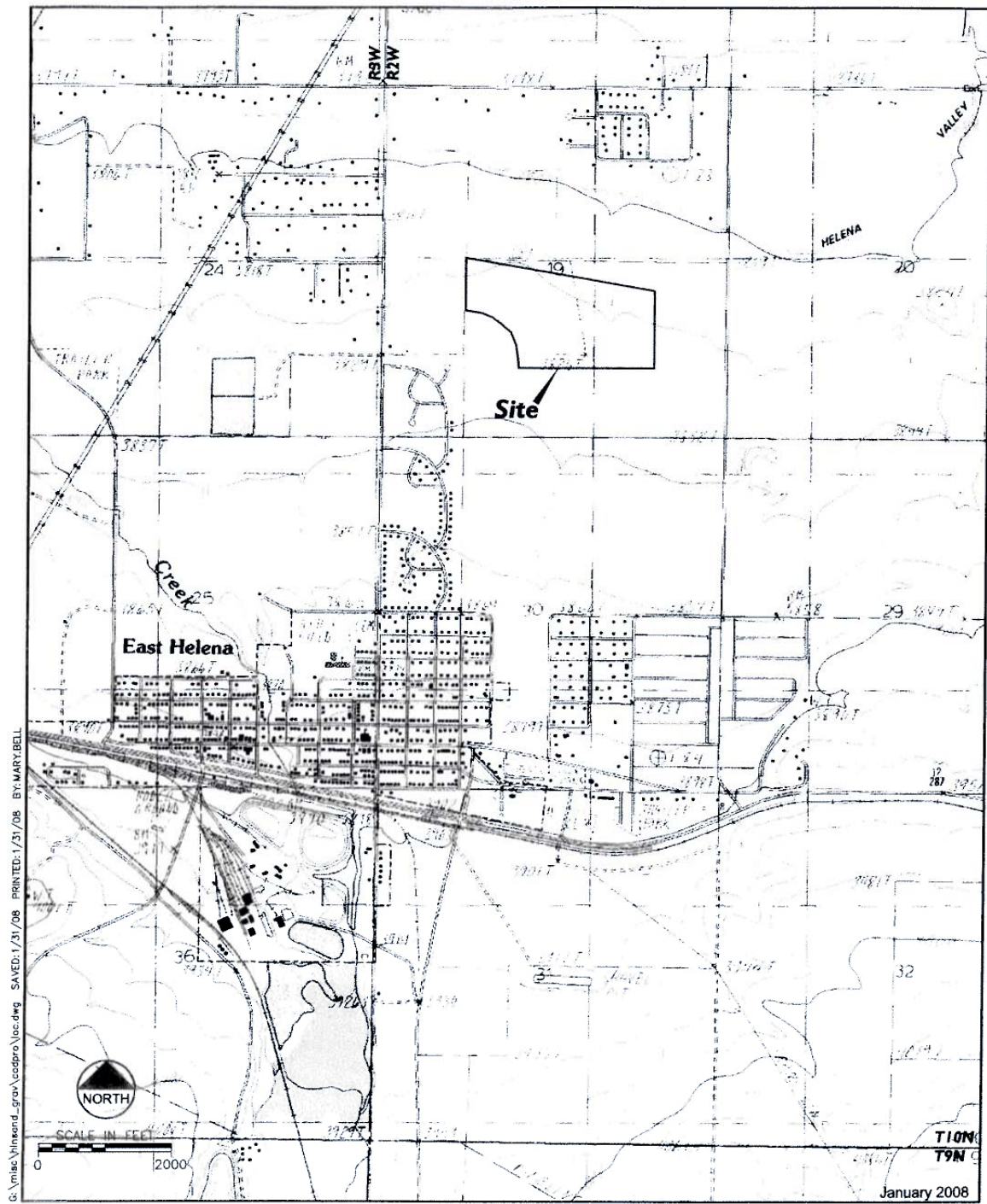
Tetra Tech



Jim Maus
Hydrogeologist

Attachments: Attachment A, Figures
Attachment B, Tables
Attachment C, Cost Spreadsheet

ATTACHMENT A FIGURES



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Property Permit Area

Location Map
Proposed - Lake Helena Drive Pit
Helena, Montana
FIGURE 1



USDA 2006 National Aerial Imagery Program and Montana Department of Revenue Tax Parcel boundaries.

January 2008



 Property Boundary
 Permit Boundary
 Proposed Monitoring Well
 Proposed Facilities

Relative locations of features and boundary lines are approximate. A field survey is recommended for precise locations.

Site Map
Proposed - Lake Helena Drive Pit
Helena, Montana
Figure 2

ATTACHMENT B TABLES

Table 1			
Analytical Parameters and Methods			
Parameter	Method	Preservative	Reporting limit ¹
Physiochemical			
Specific Conductance	E120.1	NA	1.0 µmhos/cm
pH	E150.1	NA	0.1 s.u.
Temperature	Field	NA	0.1 °C
Hardness as CaCO ₃	A2340B	NA	1
Alkalinity	E310.1	NA	1
Total Dissolved Solids	E160.1	NA	1
Dissolved Metals			
Arsenic*	E200.8	HNO ₃	0.005
Cadmium	E200.7	HNO ₃	0.001
Chromium	E200.7	HNO ₃	0.01
Copper	E200.7	HNO ₃	0.01
Iron	E200.7	HNO ₃	0.03
Lead	E200.7	HNO ₃	0.01
Manganese	E200.7	HNO ₃	0.01
Zinc	E200.7	HNO ₃	0.01
Common Cations			
Calcium	E200.7	HNO ₃	1
Magnesium	E200.7	HNO ₃	1
Potassium	E200.7	HNO ₃	1
Sodium	E200.7	HNO ₃	1
Common Anions			
Bicarbonate	E310.1	NA	1
Carbonate	E310.1	NA	1
Chloride	E300.0	NA	1
Fluoride	A4500	NA	0.01
Sulfate	E300.0	NA	1
Nutrients			
Nitrate as N	E353.2	H ₂ SO ₄	0.05
Orthophosphate	E365.1	H ₂ SO ₄	0.001
Organics			
EPHscreen	MDEP	H ₂ SO ₄	0.1 µg/L
Volatile Organic Comp.	524.2	HCl	0.5 µg/L

* Not required by MDEQ however presence at existing upgradient and downgradient wells and site proximity to the East Helena Lead Smelter Superfund Site suggest justification.

1. Units in milligrams per liter (mg/L) unless otherwise noted.

Table 2							
Monitoring Schedule							
Location	DTW	Field Param.	Organics	Physio-Chem.	Metals	Common Ions	Nutrients
MW-1	M, S	M, S	S	S, I	I	S, I	S, I
MW-2	M, S	M, S	S	S, I	I	S, I	S, I
MW-3	M, S	M, S	S	S, I	I	S, I	S, I
MW-4	M, S	M, S	S	S, I	I	S, I	S, I
MW-5	M, S	M, S	S	S, I	I	S, I	S, I

* = Field parameters include pH, temperature, and specific conductivity.

M = Monthly monitoring for first year baseline only

S = Semiannual monitoring conducted during May/June and November/December

I = Initial monitoring year only May/June and Dec./Nov. except TDS, chloride, and nitrate monitored semi-annually.